ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF PAGES 74

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER	2. CONTRACT NO. (If any)	3. ORDER NO.	4. REQUISITION/REFERENCE NO.
08/25/2011	GS00Q09BGD0022	EP-G11H-00154	PR-OEI-11-00908

5. ISSUING OFFICE (Address correspondence to)
HPOD
US Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 3803R
Washington DC 20460

6. SHIP TO:
a. NAME OF CONSIGNEE: Multiple Destinations
b. STREET ADDRESS:
c. CITY | d. STATE | e. ZIP CODE

7. TO:
a. NAME OF CONTRACTOR: CGI FEDERAL INC.
b. COMPANY NAME:
c. STREET ADDRESS: 12601 FAIR LAKES CIRCLE
GWAC SOLUTIONS CENTER
d. CITY: FAIRFAX | e. STATE: VA | f. ZIP CODE: 220334902

f. SHIP VIA:

8. TYPE OF ORDER
[ ] a. PURCHASE — REFERENCE YOUR: Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.
[X] b. DELIVERY — Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: See Schedule

10. REQUISITIONING OFFICE: OEI Office of Info. Collection

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL [X] b. OTHER THAN SMALL [ ] c. DISADVANTAGED [ ] g. SERVICE-DISABLED VETERAN-OWNED
[ ] d. WOMEN-OWNED [ ] e. HUBZone [ ] f. EMERGING SMALL BUSINESS

12. F.O.B. POINT: Destination

13. PLACE OF		14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	16. DISCOUNT TERMS
a. INSPECTION	b. ACCEPTANCE			
Destination	Destination			

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: (b)(4) Confirming Order Placed With: STEVE WINTERS, Do Not Duplicate Central Data Exchange (CDX) Support Services TOPO: Michael Hart Max Expire Date: 01/01/2017 Continued ...					

18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.	17(h) TOTAL (Cont. pages)
			$107,163,227.00

21. MAIL INVOICE TO:
a. NAME: RTP Finance Center
SEE BILLING INSTRUCTIONS ON REVERSE
b. STREET ADDRESS (or P.O. Box): US Environmental Protection Agency
RTP-Finance Center (D143-02)
109 TW Alexander Drive
c. CITY: Durham | d. STATE: NC | e. ZIP CODE: 27711

17(i) GRAND TOTAL: $107,867,227.00

22. UNITED STATES OF AMERICA BY (Signature):

23. NAME (Typed): Deborah Darry
TITLE: CONTRACTING/ORDERING OFFICER

AUTHORIZED FOR LOCAL REPRODUCTION
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (Rev. 2/2006)
Prescribed by GSA/FAR (48 CFR) 53.213(f)

CENTRAL DATA EXCHANGE (CDX) SUPPORT SERVICES - TASK ORDER CLAUSES

GSA Alliant Contract No. GS00Q09BGD0022 **Task Order No.** EP-G11H-00154

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CENTRAL DATA EXCHANGE (CDX) SUPPORT SERVICES - TASK ORDER CLAUSES

GSA Alliant Contract No. GS00Q09BGD0022 **Task Order No.** EP-G11H-00154

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GSA Alliant Contract No. GS00Q09BGD0022 Task Order No. EP-G11H-00154

SECTION B - SUPPLIES OR SERVICES AND COST/PRICE

B.1 GENERAL

1. This acquisition was conducted under FAR 16.505(b); to place an order under the GSA Alliant contract for central data exchange services, therefore the competition requirements under Far Part 15.3 did not apply. As such, the government was not obligated to determine a competitive range, conduct discussions with all contractors, or solicit final revised proposals.

2. The EPA Contracting Officer added specific EPA clauses, terms and conditions to the task order as required by EPA's Acquisition Regulation (EPAAR) and the Office of Acquisition Management's (OAM) policy.

3. All clauses in the contractor's existing GSA Alliant Contract that are in effect at the time the EPA CO issues the task order, as well as any and all modification that GSA issues to the base contract during the ordering period are incorporated by reference and shall be in full force and effect.

B.2 COST/PRICE SCHEDULE

The ceiling amount shall include loaded labor (from B.4), indirect handling rates (from B.5), Other Direct Costs (from B.6) and the Contract Access Fee (from B.7). The following ceiling amounts shall apply for payment purposes for the duration of the task order:

Base Period (January 1, 2012 - December 31, 2014)

CLIN	SCHEDULE OF SUPPLIES OR SERVICES	QUANTITY	UNIT OF ISSUE	CEILING AMOUNT
0001	Central Data Exchange (CDX) Support Services in accordance with the Performance Work Statement, Tasks 2 - 7 Base Period, Year 1 - 3 January 1, 2012 - December 31, 2014	36	MO	$ 100,224,459

Option Period 1 (January 1, 2015 - December 31, 2015)

CLIN	SCHEDULE OF SUPPLIES OR SERVICES	QUANTITY	UNIT OF ISSUE	CELING AMOUNT
0002	Central Data Exchange (CDX) Support Services in accordance with the Performance Work Statement, Tasks 2 – 7 Option Period 1, Year 4 January 1, 2015 - December 31, 2015	12	MO	$ 34,299,059

Option Period 2 (January 1, 2016 - December 31, 2016)

CLIN	SCHEDULE OF SUPPLIES OR SERVICES	QUANTITY	UNIT OF ISSUE	CELING AMOUNT
0003	Central Data Exchange (CDX) Support Services in accordance with the Performance Work Statement, Tasks 2- 7 Option Period 2, Year 5 January 1, 2016 – December 31, 2016	12	MO	$35,097,743

Option Period 3 (January 1, 2017 - December 31, 2017)

CLIN	SCHEDULE OF SUPPLIES OR SERVICES	QUANTITY	UNIT OF ISSUE	CELING AMOUNT
0004	Central Data Exchange (CDX) Support Services in accordance with the Performance Work Statement, Tasks 2- 7 Option Period 3, Year 6 January 1, 2017 - December 31, 2017	12	MO	$37,766,425

Total All Periods, (January 1, 2012 - December 31, 2017)

CLIN	SCHEDULE OF SUPPLIES OR SERVICES	QUANTITY	UNIT OF ISSUE	CELING AMOUNT
0001-0004	Central Data Exchange (CDX) Support Services in accordance with the Performance Work Statement, Tasks 2 - 7 Option Period 3, Year 6 January 1, 2012 - December 31, 2017	72	MO	$207,387,686

B.3 TECHNICAL DIRECTION DOCUMENTS

(a) The Contractor shall perform work under this task order as specified in written Task Technical Direction Documents (TDDs) issued by the Contracting Officer. The Government will issue performance-based, completion type TTDs, either on a firm fixed price or time-and-materials basis. The cumulative value of the technical direction documents for any performance period shall not exceed the established ceiling price for the performance period listed in the schedule. (See Task Order Section B.2)

Each Technical Direction Document ties back to the Quality Assurance Surveillance Plan (QASP) which will include the areas to be measured, the acceptance criteria, and the positive or negative monetary incentive, as well as the specific deliverables required under the TDD. The contractor shall submit its estimate on a FFP or T&M, as applicable with labor categories, labor rates and other direct costs clearly delineated, within ten (10) calendar days of receipt of a TDD request for proposal.

(b) The loaded direct rates included in the contractor's price submission are ceiling rates. The contractor shall review each individual technical Direction Document and propose the rates most appropriate for the requirement. The Government reserves the right to request supplemental data to substantiate any loaded labor rates proposed at the order level and to negotiate loaded labor rates based on price reasonableness or cost realism.

(d) No technical work shall begin on a TTD until such time as the contractor receives written authorization from the CO to proceed.

(e) The Contracting Officer may issue TDDs by facsimile or electronic commerce methods. The Contractor shall acknowledge receipt of the TDD request by facsimile or electronic commerce methods.

(f) Upon successful completion of the TDD, the contractor shall receive the agreed upon amount provided the services delivered were acceptable to the government and the TDD was performed in accordance with the QASP.

(g) In addition to the services/effort specified in the TTDs, the Contractor shall provide the reports and other deliverables stipulated **in Section F DELIVERIES OR PERFORMANCE.**

B.4 LOADED HOURLY FIXED LABOR RATES

The Contractor's Fixed Rate Schedule is incorporated by reference.

The term "Fixed Rates" represents the maximum loaded labor rates to be billed under this task order. The fixed rates specified in the contractor's Cost Price Volume II (pages 38 - 40) shall apply for payment purpose for the duration of the task order.

B.5 CEILING INDIRECT HANDLING RATES

The term "ceiling indirect handling rates" represents the maximum indirect handling rates to be billed under this task order. The maximum indirect handling rates specified in the contractor's Cost/Price Volume II (page 21) shall apply for payment purpose for the duration of the task order.

B.6 OTHER DIRECT COSTS

(a) Other Direct Costs (ODC), in the amount listed below, is included in the total maximum dollar value for each period of performance of the task order. Offerors shall include the specified amounts in the offeror's total estimated cost for each period of performance. The specified amounts are the maximum ceiling dollar amounts that the contractor shall not exceed. These amounts are not guaranteed to the task order awardee but are maximum dollar ceilings for each 12-month period of performance inclusive of the contractor's indirect handling rates. The ODC pool is inclusive of travel and per diem, local travel, communications, supplies and materials, reproduction, and other ODCs. The Government shall not reimburse the contractor for any dollar amount in excess of the ceiling amounts specified below.

	NOT-TO-EXCEED
Base Period of Performance, Year 1	$2,899,820.00
Base Period of Performance, Year 2	$2,366,870.00
Base Period of Performance, Year 3	$2,366,870.00
Option 1, Period of Performance, Year 4	$2,366,870.00
Option 2, Period of Performance, Year 5	$2,366,870.00
Option 3, Period of Performance, Year 6	$2,371,820.00

(b) The contractor shall submit all requests for reimbursement for all ODCs items at least one week in advance, unless otherwise authorized in writing by the CO, to the Task Order Contracting Officer Representative (TOCOR) and CO. The TOCOR will review the contractor's request and make a recommendation to the CO. The CO will provide the contractor with a written e-mail approval or disapproval of the contractor's request, and the contractor shall not incur any costs for an ODC prior to receiving the CO's approval.

(c) Any costs that the contractor incurs prior to receiving the CO's e-mail approval may be disallowed by the CO.

(d) The contractor shall ask, prior to any meeting between contractor and Government personnel, including the contractor's subcontractor personnel, whether the meeting will be via a telephone conference call, video conference call or in person.

B.7 CONTRACT ACCESS FEE

The Contract Access Fee (CAF) is ¾ of a percent (i.e., 0.0075) to be applied to the total price/cost for contractor performance as billed to the Government. The formula is: Total CAF=Total Price or Costs x CAF Percentage. The Contractor Access Fee for this order shall not exceed $150,000.00 annually or $900,000.00 over the full term of this order.

The contractor shall propose CAF as a part of their loaded hourly labor rate under Contract Line Item Numbers (CLINs) 0001, 0002, 0003 and 0004 in accordance with the price schedule B.4 entitled "Fixed Rates". The contractor shall remit the CAF to GSA in accordance with Section G.9.5 of the Alliant Master Contract.

B.8 LIMITATION OF THE GOVERNMENT'S OBLIGATION

(a) The Government reserves the right to incrementally fund this task order.

(b) The contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of those items for the Government's convenience, approximates the total amount currently allotted to the task order. The allotment schedule is established as follows:

Base Period January 1, 2012 - December 31, 2014

Base Amount	This Action	Total Funding
$0.00	(b)(4)	(b)(4)

The contractor will not be obligated to continue work beyond that point. Subject to the clause entitled "Termination for Convenience of the Government," the Government will not be obligated in any event to reimburse the contractor in excess of the amount allotted to the task order. As used in this clause, the total amount payable by the Government in the event of termination are costs incurred as of the date of termination plus reasonable estimated termination costs.

(c) Notwithstanding the date specified in the allotment schedule in this clause, the Contractor will notify the Contracting Officer, in writing, at least 5 days prior to the date when, in the contractor's best judgment, the work will reach the point at which the total amount payable by the government including any cost for termination for convenience, will approximate 85% of the total amount then allotted to the task order for the contractor's performance. The notification will state (1) the estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance. If after such notification, additional funds are not allotted by the date identified in the contractor's notification, the Contracting Officer will execute the clause entitled "Termination for Convenience of the Government."

(d) The parties contemplate that the Government will allot additional funds for continued performance of the task order and will determine the estimated period of contract performance which will be covered by the funds. The provisions of paragraphs (b) through (d) of this clause will apply in like manner to the additional allotted funds and to the new estimated period of performance and the Contracting Officer will modify the task order accordingly.

(e) If, solely by reason of failure of the Government to allot additional funds in amounts sufficient for timely performance, the contractor incurs additional costs or is delayed in the performance of the work under the task order and if additional funds are allotted, the Contracting Officer will make an equitable adjustment. Failure to agree to any such equitable adjustment hereunder will be a dispute concerning a question of fact within the meaning of the clause entitled "Disputes."

(f) The Government may, at any time prior to termination, allot additional funds for the performance of the task order.

(g) The termination provisions of this clause do not limit the rights of the Government under the clause entitled "Termination for Cause." The provisions of this clause are limited to the work and allotment of funds for the task order. This clause no longer applies once the task order is fully funded except with regard to the rights or obligations of the parties concerning equitable adjustments negotiated under paragraph (d) or (e) of this clause.

(h) Nothing in this clause affects the right of the Government to terminate the task order pursuant to the clause entitled "Termination for Convenience of the Government."

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 TASK ORDER PERFORMANCE STATEMENT OF WORK

The Contractor shall furnish the necessary personnel, material, equipment, services and facilities (except as otherwise specified), to perform the Performance Work Statement included in Attachment 1.

C.2 NOTICE REGARDING PROHIBITED CONTRACTOR ACTIVITIES ON ENVIRONMENTAL PROTECTION AGENCY (EPA) CONTRACTS (EP 52.000-000) (NOV 1994)

The Contractor shall not perform any of the following activities on behalf of EPA in connection with this contract:

1. The actual preparation of Congressional testimony.

2. The interviewing or hiring of individuals for employment at EPA.

3. Developing and/or writing of Position Descriptions and Performance Standards.

4. The actual determination of Agency policy.

5. Participating as a voting member on a Performance Evaluation Board; participating in and/or attending Award Fee meetings.

6. Preparing Award Fee Letters, even under typing services contracts.

7. The actual preparation of Award Fee Plans.

8. The preparation of documents on EPA Letterhead other than routine administrative correspondence.

9. Reviewing vouchers and invoices for the purposes of determining whether costs, hours, and work performed are reasonable.

10. The preparation of Statements of Work, Work Assignments, Technical Direction Documents, Delivery Orders, or any other work issuance document

under a contract that the contractor is performing or may perform. Such a work issuance document, prepared by an EPA prime contractor under an EPA prime contract for its subcontractor, is exempt from this prohibition.

11. The actual preparation of responses to audit reports from the Inspector General, General Accounting Office, or other auditing entities.

12. Preparing responses to Congressional correspondence.

13. The actual preparation of responses to Freedom of Information Act requests, other than routine, non-judgmental correspondence.

14. Any contract which authorizes a contractor to represent itself as EPA to outside parties.

15. Conducting administrative hearings.

16. Reviewing findings concerning the eligibility of EPA employees for security clearances.

17. The actual preparation of an office's official budget request.

C.3 INCORPORATION OF CONTRACTOR'S TECHNICAL PROPOSAL (EP 52.210-120) (APR 1984)

The Contractor's submission in response to the task order request for proposal dated April 11, 2011 is incorporated by reference and is made a part of this task order. In the event of any inconsistency between the provisions of this task order and the Contractor's proposal submission, the task order provisions take precedence.

C.4 COMPLIANCE WITH EPA POLICIES FOR INFORMATION RESOURCES MANAGEMENT

(a) Definition. Information Resources Management (IRM) is defined as any planning, budgeting, organizing, directing, training, promoting, controlling, and managing activities associated with the burden, collection, creation, use and dissemination of information. IRM includes both information itself, and the management of information and related resources such as personnel, equipment, funds, and technology. Examples of these services include but are not limited to the following:

(1) The acquisition, creation, or modification of a computer program or automated data base for delivery to EPA or use by EPA or contractors operating EPA programs.

(2) The analysis of requirements for, study of the feasibility of, evaluation of alternatives for, or design and development of a computer program or automated data base for use by EPA or contractors operating EPA programs.

(3) Services that provide EPA personnel access to or use of computer or word processing equipment, software, or related services.

(4) Services that provide EPA personnel access to or use of: Data communications; electronic messaging services or capabilities; electronic bulletin boards, or other forms of electronic information dissemination; electronic record keeping; or any other automated information services.

(5) Services that are subject to the Brooks Act of 1965, as amended (Pub. L. 89 306).

(b) General. The contractor shall perform any IRM related work under this task order in accordance with the IRM policies, standards and procedures set forth in this clause and noted below. The contractor shall check the listing of directives (see paragraph (d) for electronic access). The applicable directives for performance of the work are those in effect on the date of the task order award or upon the date of EPA-wide changes to those directives, whichever comes later.

(1) IRM Policies, Standards and Procedures. The 2100 Series (2100-2199) of the Agency's Directive System contains the majority of the Agency's IRM policies, standards and procedures.

(2) Groundwater Program IRM Requirement. A contractor performing any work related to collecting Groundwater data; or developing or enhancing data bases containing Groundwater quality data shall comply with EPA Order 7500.1A - Minimum Set of Data Elements for Groundwater.

(3) Enterprise Architecture (EA). Contractors performing IRM activities on behalf of the Agency shall conform with EPA's Enterprise Architecture as specified in EPA's EA Status Report found on EPA's internet website - http://www.epa.gov/docs/irmpoli8.

(4) Earned Value Management (EVM). Contractors performing IRM activities on behalf of the Agency shall conform to EPA's Earned Value Management Systems requirements, shall be in compliance with the ANSI/EIA Standard 748-A, and shall conform to all EPA governing documents associated with EPA's Information Technology (IT) infrastructure. EPA's EVM Procedures, dated December 30, 2004, includes all the requirements for this paragraph and may be found on EPA's internet website - http://www.epa.gov/docs/irmpoli8.

(c) Printed Documents. Documents listed in (b)(1) and (b)(2) may be obtained from:

U.S. Environmental Protection Agency
Office of Administration
Facilities Management and Services Division
Distribution Section
Mail Code: 3204M
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460
Phone: (202) 564-9629

(d) Electronic Access. A complete listing, including full text, of documents included in the 2100 Series of the Agency's Directive System is maintained on the EPA Public Access Server on the Internet at http://epa.gov/docs/irmpoli8/

C.5 ADDITIONAL INFORMATION REGARDING EPA POLICIES FOR INFORMATION RESOURCES MANAGEMENT (IRM)

(a) The Contracting Officer reserves the right to update the Task Order whenever Environmental Protection Agency (EPA), the Office of Management and Budget (OMB) and/or the Office of Federal Procurement Policy (OFPP), policies, procedures and regulation changes.

(b) The Contracting Officer will provide the contractor with an opportunity to respond to changes to the policy procedures; however, the contractor shall comply immediately to these changes unless the Contracting Officer directs otherwise or provides the contractor with a specific written exemption.

(c) The Contracting Officer will provide hard copies of any IRM policies to the contractor upon request or when a change to IRM policy is unavailable but applicable to contractor performance.

C.6 SECTION 508 COMPLIANCE

All deliverable shall be in compliance with the Section 508 Accessibility Standards of the Rehabilitation Act of 1973 and Amendments of 1998. When preparing deliverables, the Contractor shall refer to the most recent version of 508 standards, which can be found at: http://www.access-board.gov/sec508/guide.

SECTION D - PACKAGING AND MARKING

[For this Solicitation, there are NO clauses in this Section]

SECTION E - INSPECTION AND ACCEPTANCE

E.1 NOTICE Listing Contract Clauses Incorporated by Reference

NOTICE:

The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

NUMBER	DATE	TITLE
52.246-6	MAY 2001	INSPECTION--TIME-AND-MATERIAL AND LABOR-HOUR
52.246-4	AUG 1996	INSPECTION OF SERVICES—FIXED PRICE

SECTION F - DELIVERIES OR PERFORMANCE

F.1 NOTICE Listing Contract Clauses Incorporated by Reference

NOTICE:

The following solicitation provisions and/or contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

NUMBER	DATE	TITLE
52.242-15	AUG 1989	STOP WORK ORDER

F.2 MONTHLY PROGRESS AND FINANCIAL REPORTS

(a) The contractor shall furnish one (1) electronic copy of the Monthly Progress Report (MPR) and one (1) copy of the Monthly Financial Report (MFR) stating the progress made, including the percentage of the project completed, and a description of the work accomplished to support the cost.

(b) Specific discussions shall include difficulties encountered and remedial action taken during the reporting period, and anticipated activity with a schedule of deliverables for the subsequent reporting period.

(c) The contractor shall provide a list of outstanding actions awaiting Contracting Officer authorization, noted with the corresponding task area and/or ODC item(s).

(d) The report shall specify financial status for the task order as follows:

(1) For the current reporting period, display the amount claimed.

(2) For the cumulative period and the cumulative task order life display: the amount obligated, amount originally invoiced, amount paid, amount suspended, amount disallowed, and remaining approved amount. The remaining approved amount

is defined as the total obligated amount, less the total amount originally invoiced, plus total amount disallowed.

(3) For Fixed-Price portion of the monthly reporting period for each period of performance.

(i) A list of employees, their labor categories, and the numbers of hours worked for the reporting period.

(ii) For the current reporting period, display the total cost broken out by the task order prime contractor and for each of the prime contractor's subcontractors.

(iii) For the cumulative task order period of performance: the awarded amount, expended and remaining cost for the prime contractor, and each of the prime contractor's subcontractors.

(iv) Display the estimated costs to be expended during the next reporting period.

(v) Display the current dollar ceilings in the task order, net amount invoiced, and remaining amounts for the following categories: contractor costs, subcontracts by individual subcontractor if applicable, and ODCs.

(vi) Unbilled allowable costs. Display the total costs incurred but unbilled for the current reporting period and cumulative for the task order.

(4) For the optional quantity portion of the monthly reporting period in each period of performance.

(i) A list of employees, their labor categories, and the numbers of hours worked for the reporting period.

(ii) For the current reporting period, display the total cost broken out by the prime contractor and each of the prime contractor's subcontractors.

(iii) For the cumulative task order period of performance and the cumulative task order life display: the awarded amount, expended and remaining cost for the prime contractor, and each subcontractor.

(iv) Display the estimated costs to be expended during the next reporting period.

(v) Display the current dollar ceilings in the task order, net amount invoiced, and remaining amounts for the following categories: contractor costs, subcontracts by individual subcontractor if applicable, and ODCs.

(vi) Unbilled allowable costs. Display the total costs incurred but unbilled for the current reporting period and cumulative for the task order.

(e) The report's financial status shall specify:

(1) For the current period, display the amount claimed.

(2) For the cumulative period display: amount shown on accepted submission incorporated into the task order or the revised amount, if applicable, (whichever is later); amount currently claimed; amount paid; amount suspended; amount disallowed; and remaining approved amount. The remaining approved amount is defined as: the task order amount, less total amounts originally invoiced, plus total amount disallowed.

(3) Labor hours.

(i) A list of employees, their labor categories, and the number of hours worked for the reporting period.

(ii) For the current reporting period, display the expended direct labor hours and costs broken out for the prime contractor and each subcontractor.

(iii) For the current reporting period, cumulative task order period, and the cumulative task order life display: the negotiated, expended and remaining direct labor hours and costs broken out by task order labor hour category for the prime contractor and each subcontractor.

(iv) Display the estimated direct labor hours and costs to be expended during the next reporting period.

(v) Display the estimates of remaining costs for the fixed-price portion of the task order and the direct labor hours and costs for any exercised optional quantities to complete the task order.

(4) Unbilled allowable costs. Display the total costs incurred but unbilled for the current reporting period and cumulative for the task order.

(5) A list of deliverables for the task order during the reporting period.

(f) This submission does not change the notification requirements of the "Limitation of the Government's Obligation" requiring separate written notice to the Contracting Officer.

(g) The reports shall be submitted to the TOCOR and CO within seven (7) business days each month after the close of the contractor's billing cycle and in accordance with the clause "Submission of Invoices" following the first complete reporting period of the task order.

F.3 DELIVERABLES

The following table contains the basic deliverables required under the order. Additional deliverables may be specified within the technical direction documents. The Government does not waive its right to request deliverables under the order, even if such requirements are not specifically listed in this table.

ID	Section	Deliverable Title	Frequency*	Deliver To
1	Clause B.3	Response to Technical Direction Documents	As Required	TOCOR,ACO
2	PWS Sec. 7.5	Program Management Plan	As Required	TOCOR,ACO
3	PWS Sec. 7.4.1	Incoming Transition Plan	As Required	TOCOR, ACO
4	PWS Sec. 7.2	Final Resource Plan	As Required	TOCOR, ACO
5	PWS Sec. 7.3	Communications Plan	As Required	TOCOR, ACO
6	PWS Sec. 7.6	Revised Quality Control Plan	Every 6 months if required	TOCOR, ACO
7	PWS Sec. 7.1.1	Monthly Progress Report (MPR)	Monthly	TOCOR, ACO
8	PWS Sec. 7.1.2	Monthly Financial Report (MFR)	Monthly	TOCOR, ACO
9	PWS Sec. 2.1.5	Inventory Report	Monthly	TOCOR, ACO
10	PWS Sec. 7.1.3	Adhoc Reports	As Required	TOCOR, CORs

11	Clause G.5	Government Property Report	October 5	PA, TCOR, ACO
12	PWS Sec. 7.4.2	Outgoing Transition Plan	120 Days prior to task order expiration	TOCOR, ACO

F.4 WORKING FILES

The contractor shall maintain accurate working files, (by task area in Section C Statement of Work,) on all work documentation including calculations, assumptions, interpretations of regulations, sources of information, and other raw data required in the performance of this task order. The contractor shall provide the information contained in its working files upon request of the Contracting Officer.

F.5 PERIOD OF PERFORMANCE

The effective period of this task order is from January 1, 2012 through December 31, 2014.

F.6 PLACE OF PERFORMANCE

The place of performance and/or delivery requirements shall be within the Washington D.C. Metropolitan Area.

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 SUBMISSION OF INVOICES

In order to be considered properly submitted, an invoice or request for task order financing payment must meet the following requirements in addition to the requirements of FAR 32.905:

(a) Unless otherwise specified in the task order, an invoice or request for task order financing payment shall be submitted as an original and one copy. The contractor shall submit the invoice or request for task order financing payment to the following offices/individuals in the task order: the original and two copies to the Accounting Operations office shown in Block 25 on the cover of the SF 33 and an electronic copy each to the Task Order Contracting Officer's Representative and Contracting Officer.

(b) The contractor shall prepare its invoice or request for task order financing payment on the prescribed Government forms. Standard Forms Number 1034, Public Voucher for Purchases and Services other than Personal, shall be used by contractors to show the amount claimed for reimbursement. Standard Form 1035, Public Voucher for Purchases and Services other than Personal - Continuation Sheet, shall be used to furnish the necessary supporting detail or additional information required by the Contracting Officer. The contractor may submit self-designed forms which contain the required information.

(c)(1) The contractor shall prepare a task order level invoice or request for task order financing payment in accordance with the invoice preparation instructions identified as a separate attachment to the task order.

(c)(2) The invoice or request for task order financing payment shall include current and cumulative charges by major cost element such as direct labor, overhead, travel, equipment, and other direct costs. For current costs, each major cost element shall include the appropriate supporting schedule identified in the invoice preparation instructions. Cumulative charges represent the net sum of current charges by cost element for the task order period.

(d)(1) The charges for subcontracts shall be further detailed in a supporting schedule showing the major cost elements for each subcontract.

(d)(2) On a case-by-case basis, when needed to verify the reasonableness of subcontractor costs, the Contracting Officer may require that the contractor obtain from the subcontractor cost information in the detail set forth in

(c)(2). This information should be obtained through a means which maintains subcontractor confidentiality (for example, via sealed envelopes), if the subcontractor expresses CBI concerns.

(e) Invoices or requests for task order financing payment must clearly indicate the period of performance for which payment is requested. Separate invoices or requests for task order financing payment are required for charges applicable to the basic task order and each option period.

(f)(1) Notwithstanding the provisions of the clause of the contractor's GSA contract at FAR 52.216-7, Allowable Cost and Payment, invoices or requests for task order financing payment shall be submitted once per month unless there has been a demonstrated need and Contracting Officer approval for more frequent billings. When submitted on a monthly basis, the period covered by invoices or requests for contractor financing payments shall be the same as the period for monthly progress reports required under this task order.

(f)(2) The contractor's invoice shall have the same ending period of performance as the monthly progress report.

(f)(3) Where cumulative amounts on the monthly progress report differ from the aggregate amounts claimed in the invoice(s) or request(s) for task order financing payments covering the same period, the contractor shall provide a reconciliation of the difference as part of the payment request.

G.2 CONTRACTING OFFICER'S REPRESENTATIVES

The Contracting Officer's Representative (COR), the Task Order COR (TOCOR), the Alternate TOCOR(s), the Contract Specialist (CS) and Contracting Officer (CO) for this task order are as follows:

CONTRACTING OFFICER'S REPRESENTATIVE (TOCOR)

TASK ORDER COR (TOCOR)

Michael Hart (Mike)

Email: hart.michael@epa.gov

Phone: (202) 566-1696

Fax: 202-731-5236

Location/Office: OEI/OIC/IESD/IETB

EPA West Building, 6416J

Washington DC 20004

ADMINISTRATIVE CONTRACTING OFFICER:

Sandra Ceasar

Email: ceasar.sandra@epa.gov

Phone: (202) 564-5390

Location/Office OARM/OAM/HPOD/IRMPSC

Ronald Reagan Building 7th Floor

Washington, DC 20004

G.3 CONTRACTOR PERFORMANCE INFORMATION

(a) In accordance with Federal Acquisition Regulation (FAR) Subpart 42.15 and EPAAR Deviation 1542.15, past performance evaluations shall be prepared and submitted electronically to the Past Performance Information Retrieval System (PPIRS). The process for submitting evaluation reports to PPIRS shall be through use of the Contractor Performance Assessment Reporting System (CPARS) which has connectivity with PPIRS.

Using CPARS, EPA shall evaluate contractor performance using the following evaluation factors as applicable: Technical (Quality of Product), Product Performance, Systems Engineering, Software Engineering, Logistic Support/Sustainment, Product Assurance, Other Technical Performance, Schedule, Cost Control (Not Applicable for Firm-Fixed Price or Firm-Fixed Price with Economic Price Adjustment), Management, Management Responsiveness, Subcontract Management, Program Management and Other Management, Other Areas, and Utilization of Small Business.

Each evaluation factor shall be rated in accordance with a five scale rating system: Red/Unsatisfactory, Yellow/Marginal, Green/Satisfactory, Purple/Very Good, and Dark Blue/Exceptional, N/A = Not Applicable. Plus or minus signs may be used to indicate an improving (+) or worsening (-) trend insufficient to change assessment status.

(b) The contractor shall designate a representative to whom the evaluation will be sent automatically and electronically. The name, title, e-mail address and phone number of the designated contractor representative shall be provided to the Contracting Officer who will, in turn, provide that information to their CPARS Focal Point administrator for authorization access. Any changes in designated contractor personnel representative shall be the sole responsibility of the contractor to inform the Contracting Officer and the CPARS Focal Point.

The contractor has thirty (30) calendar days from the date of the contractor's receipt of the Report to review and provide a response to the Contracting Officer regarding the contents of the Report. The response shall be sent through CPARS.

The contractor's response to the Report may include written comments, rebuttals (disagreements), or additional information. If the contractor does not respond to the Report within the designated thirty (30) calendar days, the specified ratings in the Report are deemed appropriate for the evaluation period. In this instance, the Contracting Officer shall complete the Agency review and finalize the evaluation in CPARS after expiration of the specified 30 calendar days.

If the contractor submits comments, rebuttals (disagreements), or additional information to the Contracting Officer which contests the ratings, the Contracting Officer, in consultation with the contract level Contracting Officer's representative and/or applicable official, shall initially try to resolve the disagreement with the contractor.

If the disagreement is not resolved between the contractor and the Contracting Officer, the matter will be referred, as promptly as possible, to the Reviewing Official (an official at least one level above the Contracting Officer or Contract Specialist) for resolution.

The Agency Reviewing Official shall record a determination in CPARS. The ultimate conclusion on the performance evaluation is a decision of the EPA.

The Contracting Officer shall complete the Agency review and finalize the evaluation in CPARS after the Contracting Officer receives the Agency Reviewing Official's determination.

An interim or final report is considered completed after the Contracting Officer finalizes the evaluation in CPARS.

G.4 GOVERNMENT PROPERTY (EPAAR 1552.245-70) (SEP 2009) DEVIATION

(a) The contractor shall not fabricate or acquire, on behalf of the Government, either directly or indirectly through a subcontract, any item of property without prior written approval from the Contracting Officer. If the Contracting Officer authorizes the contractor to acquire and/or fabricate

equipment for use in the performance of this contract, the equipment shall be subject to the provisions of the ''Government Property'' clause and listed on the contract via contract modification.

(b) If the Government provides item(s) of Government property to the contractor for use in the performance of this contract, this property shall be used and maintained by the contractor in accordance with the provisions of the ''Government Property'' clause.

The ''EPA Contract Property Administration Requirements'' provided below apply to this contract.

U.S. Environmental Protection Agency

Contract Property Administration Requirements

1. *Purpose.* This document sets forth the requirements for the U.S. Environmental Protection Agency (EPA) contractors performing Government property management responsibilities under EPA contracts. These requirements supplement those contained in the Government Property clause(s) and Part 45 Government Property of the Federal Acquisition Regulation (FAR).

2. *Contract Property Administration* (CPAR)

a. *EPA Delegation.* EPA delegates all contract property administration to the EPA Contract Property Coordinator (CPC). The delegations apply to all EPA contracts issued with or that have the potential to receive, purchase or acquire Government Property or include the Government Property clauses. In addition to administering all contract property, the CPC provides technical expertise and assistance to the Contracting Officer (CO) and Contracting Officer Technical Representative (COTR) relative to Government Property.

b. *DCMA Re-delegation.* The CPC may request support for contract property management oversight, including property administration and plant clearance, from the Defense Contract Management Agency (DCMA). If DCMA agrees to provide support, DCMA will notify the contractor of the assigned property administrator (PA) and plant clearance officer (PLCO). The DCMA PA is available to the contractor for assistance in all matters of property administration.

Notwithstanding the delegation, as necessary, the contractor may contact the EPA CO. In the event of a disagreement between the contractor and the DCMA PA, the contractor should seek resolution from the CO. Unless, otherwise directed in the contract, or this document, all originals of written information or reports, except direct correspondence between the contractor

and the DCMA PA, relative to Government property, should be forwarded to the administrative CO assigned to this contract and the CPC.

c. *Disagreements.* Notwithstanding the delegation (s), as necessary, the contractor may contact the CO. In the event of a disagreement between the contractor and the PA or the CPC the contractor should seek resolution from the CO.

3. *Requests for Government Property.*

In accordance with FAR 45.102, the contractor shall furnish all property required for performing Government contracts. If a contractor believes that Government property is required for performance of the contract, the contractor shall submit a written request to the CO. At a minimum, the request shall contain the following elements:

a. Contract number for which the property is required.

b. An item(s) description, quantity and estimated cost.

c. Certification that no like contractor property exists which could be utilized.

d. A detailed description of the task-related purpose of the property.

e. Explanation of negative impact if property is not provided by the Government.

f. Lease versus purchase analysis shall be furnished with the request to acquire property on behalf of the Government, with the exception of requests for material purchases. The contractor may not proceed with acquisition of property on behalf of the Government until receipt of written authorization from the Contracting Officer.

4. *Transfer of Government Property.* The Contracting Officer initiates the transfer of the government property via a contract modification. The transferor (EPA or another contractor) shall provide to the transferee, the receiving contractor, the information needed to establish and maintain the property records required of FAR 52.245-1, as well as, all of the applicable data elements required by Attachment 1 of this clause. The transferee, the receiving contractor, should perform a complete inventory of the property

before signing the acceptance document for the property. Accountability will transfer to the receiving contractor upon receipt and acceptance of the property, in accordance with FAR 45.106.

5. *Records of Government Property.*

a. In accordance with FAR 52.245-1, the contractor shall create and maintain records of all Government property, regardless of value, including property provided to and in the possession of a subcontractor. Material provided by the Government or acquired by the contractor and billed as a direct charge to the contract is Government property and records must be established as such.

b. The Contractor shall identify all Superfund property and designate it as such both on the item and on the Government property record. If it is not practicable to tag the item, the contractor shall write the ID number on a tag, card or other entity that may be kept with the item or in a file.

c. Support documentation used for posting entries to the property record shall provide complete, current and auditable data. Entries shall be posted to the record in a timely manner following an action.

d. For Government vehicles, in addition to the data elements required by EPA, the contractor shall also comply with the General Services Administration (GSA) and Department of Energy (DOE) record and report requirements supplied with all EPA provided motor vehicles. If the above requirements were not provided with the vehicle, the contractor shall notify the designated CPC and the Fleet Manager.

e. When Government property is disclosed to be in the management and/or control of the contractor but not provided under any contract, the contractor shall record and report the property in accordance with FAR 52.245-1.

6. Inventories of Government Property.

The contractor shall conduct a complete physical inventory of EPA property at least once per year. The contractor shall report the results of the inventory, including any discrepancies, to the CO. Reconciliation of discrepancies shall be completed in accordance with the schedule negotiated with the CO. See section 10 herein, Contract Closeout, for information on final inventories.

7. *Reports of Government Property.* EPA requires an annual summary report, for each contract, by contract number, of Government property in the

contractor's possession. The annual summary is due as of September 30th of each year, and upon contract termination or expiration.

a. For each classification listed on the EPA Property Report form, with the exception of material, the contractor shall provide the total acquisition cost and total quantity. If there are zero items in a classification, or if there is an ending balance of zero, the classification must be listed with zeros in the quantity and acquisition cost columns.

b. For material, the contractor shall provide the total acquisition cost only.

c. Property classified as Plant Equipment, Superfund and Special Test Equipment must be reported on two separate lines. The first line shall include the total acquisition cost and quantity of all items or systems with a unit acquisition cost of $25,000 or more. The second line shall include the total acquisition cost and quantity of all items with a unit acquisition cost of less than $25,000.

d. For items comprising a system, which is defined as "a group of interacting items functioning as a complex whole," the contractor may maintain the record as a system noting all components of the system under the main component or maintain individual records for each item. However, for the annual report of Government property the components must be reported as a system with one total dollar amount for the system, if that system total is $25,000 or more.

e. **The reports are to be received at EPA by the CPC by October 5th of each year.**

f. Distribution shall be as follows:

Original to: CPC

One copy: CO

g. Contractors are required to comply with GSA and DOE special reporting requirements for motor vehicles. A statement of these requirements will be provided by the EPA Facility Management and Services Division (FMSD) concurrent with receipt of each vehicle.

h. The contractor shall provide detailed reports on an as-needed basis, as may be requested by the CO or the CPC.

8. *Disposition of Government Property.* The disposition process is composed of three distinct phases: identification, reporting, and final disposition.

a. *Identification.* The disposition process begins with the contractor identifying Government property that is no longer required for contract performance. Effective contract property management systems provide for identification of excess as it occurs. Once Government property has been determined to be excess to the accountable contract, it must be screened against the contractor's other EPA contracts for further use. If the property may be reutilized, the contractor shall notify the CO in writing. Government property will be transferred via contract modifications to other contracts only when the COs on both the current contract and the receiving contract authorize the transfer.

b. *Reporting.*

(i) EPA. Government property shall be reported in accordance with FAR 52.245-1. The Standard Form, SF 1428, Inventory Disposal Schedule, provides the format for reporting excess Government property. Instructions for completing and when to use the form may be found at FAR 52.245-1 (j). Forward the completed SF 1428 to the CPC. The SF 1428 is available at http://www.arnet.gov/far/current/html/FormsStandard54.html.

Superfund property must contain a Superfund notification and the following language must be displayed on the form: ''Note to CO: Reimbursement to the EPA Superfund is required.''

(ii) *DCMA.* If the EPA contract has been re-delegated to DCMA, the excess items will be entered into the Plant Clearance Automated Reutilization Screening System (PCARSS). Access and information pertaining to this system may be addressed to the DCMA Plant Clearance Officer (PLCO).

c. *Disposition Instructions.*

(i) *Retention.* When Government property is identified as excess, the CO may direct the contractor in writing to retain all or part of the excess Government Property under the current contract for possible future requirements.

(ii) *Return to EPA.* When Government property is identified as excess, the CO may direct the contractor in writing to return those items to EPA inventory. The contractor shall ship/deliver the property in accordance with the instructions provided by the CO.

(iii) *Transfer.* When Government property is identified as excess, the CO may direct the contractor in writing to transfer the property to another EPA contractor. The contractor shall transfer the property by shipping it in accordance with the instructions provided by the CO. To effect transfer of accountability, the contractor shall provide the recipient of the property with the applicable data elements set forth in Attachment 1 of this clause.

(iv) *Sale.* If GSA or the DCMA PLCO conducts a sale of the excess Government property, the contractor shall allow prospective bidders access to property offered for sale.

(v) *Abandonment.* Abandoned property must be disposed of in a manner that does not endanger the health and safety of the public. If the contract is delegated to DCMA and the contractor has input EPA property into the PCARSS system, the EPA Property Utilization Officer (PUO) shall notify the CO. The CO shall notify the contractor in writing of those items EPA would like to retain, have returned or transferred to another EPA contractor. The contractor shall notify the DCMA PLCO and request withdrawal of those items from the inventory schedule. The contractor shall update the Government property record to indicate the disposition of the item and to close the record. The contractor shall also obtain either a signed receipt or proof of shipment from the recipient. The contractor shall notify the CO when all actions pertaining to disposition have been completed. The contractor shall complete an EPA Property report with changes, to include supporting documentation of completed disposition actions and submit it to the CPC.

9. *Decontamination.* In addition to the requirements of the ''Government Property'' clause and prior to performing disposition of any EPA Government Property, the contractor shall certify in writing that the property is free from contamination by any hazardous or toxic substances.

10. *Contract Closeout.* The contractor shall complete a physical inventory of all Government property at contract completion and the results, including any discrepancies, shall be reported to the CO. If the contract is delegated to DCMA, the physical inventory report will be submitted to the EPA CO and a copy submitted to the DCMA PA.

In the case of a terminated contract, the contractor shall comply with the inventory requirements set forth in the applicable termination clause. The results of the inventory, as well as a detailed inventory listing, must be forwarded to the CO and if delegated, a copy to the DCMA PA. In order to expedite the disposal process, contractors may be required to, or may elect to submit to the CPC, an inventory schedule for disposal purposes up to six (6) months prior to contract completion. If such an inventory schedule is prepared, the contractor must indicate the earliest date that each item may be

disposed. The contractor shall update all property records to show disposal action. The contractor shall notify the CO, and, if delegated, the DCMA PA, in writing, when all work has been completed under the contract and all Government property accountable to the contract has been disposed. The contractor shall complete a FINAL EPA Property report with all supporting documentation to the CPC.

Attachment 1

Required Data Element- In addition to the requirements of FAR 52.245-1(f)(vi), Reports of Government Property, the contractor is required to maintain, and report the following data elements for EPA Government property (all elements are not applicable to material):

Name and address of the administrative Contracting Officer;

Name of the contractor representative;

Business type;

Name and address of the contract property coordinator;

Superfund (Yes/No);

No. of Subcontractor/Alternate Locations

Note: For items comprising a system which is defined as, "a group of interacting items functioning as a complex whole," the contractor may maintain the record as a system noting all components of the system under the main component or maintain individual records for each item. However, for the Annual Report of Government Property, the components must be reported as a system with one total dollar amount for the system, if that system total is $25,000 or more.

ATTACHMENT 1

CENTRAL DATA EXCHANGE (CDX) SUPPORT SERVICES

U.S. EPA
Central Data Exchange (CDX) Support

Statement of Work

February 10, 2011

United States Environmental Protection Agency (EPA)
Office of Environmental Information (OEI)
Office of Information Collection (OIC)

1. Background

The United States Environmental Protection Agency (EPA) is charged with protecting human health and the environment. Since 1970, EPA has been working for a cleaner, healthier environment for the American people.

EPA employs 17,000 people across the country, including our headquarters offices in Washington, DC, ten regional offices, and more than a dozen labs. EPA staff is highly educated and technically trained; more than half are engineers, scientists, and policy analysts. In addition, a large number of employees are legal, public affairs, financial, information management and computer specialists. EPA is led by the Administrator, who is appointed by the President of the United States. The following are the primary work areas in which EPA has been tasked:

- Develop and enforce regulations: EPA works to develop and enforce regulations that implement environmental laws enacted by Congress. EPA is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

- Offer financial assistance: In recent years, between 40 and 50 percent of EPA's enacted budgets have provided direct support through grants to State environmental programs. EPA grants to States, non-profits and educational institutions support high-quality research that will improve the scientific basis for decisions on national environmental issues and help EPA achieve its goals.

- Perform environmental research: At laboratories located throughout the nation, the Agency works to assess environmental conditions and identify, understand, and solve current and future environmental problems; integrate the work of scientific partners such as nations, private sector organizations, academia and other agencies; and provide leadership in addressing emerging environmental issues and in advancing the science and technology of risk assessment and risk management.

- Sponsor voluntary partnerships and programs: The Agency works through its headquarters and regional offices with over 10,000 industries, businesses, non-profit organizations, and state and local governments, on over 40 voluntary pollution prevention programs and energy conservation efforts. Partners set voluntary pollution-management goals; examples include conserving water and energy, minimizing greenhouse gases, slashing toxic emissions, re-using solid waste, controlling indoor air pollution, and getting a handle on pesticide risks. In return, EPA provides incentives like vital public recognition and access to emerging information.

- Further environmental education: EPA advances educational efforts to develop an environmentally conscious and responsible public, and to inspire personal responsibility in caring for the environment.

More information about EPA's mission and strategy can be found at www.epa.gov.

The Office of Environmental Information (OEI), headed by the Chief Information Officer, manages the life cycle of information to support EPA's goal of protecting human health and the environment. The OEI Office of Information Collection (OIC) collects, manages, provides and safeguards environmental information.

As a result of increasing demand for electronic reporting and data exchange among trading partners and the regulated community, in 1999 EPA established the Central Data Exchange (CDX). CDX is the designated gateway where environmental data is received from the regulated community and processed for delivery to program offices in the Agency. CDX also serves as the point of presence on the National Environmental Information Exchange Network where State and Tribes routinely conduct data transactions with EPA.

1.1 CDX Stakeholders

The CDX Program has many stakeholders. Listed below are descriptions of some of the various stakeholders to which the contractor shall interact with:

- ***EPA Program Offices and EPA Regional Offices*** – Develops environmental rules that require submission of environmental data to EPA. Provide funding for CDX projects to the OEI CDX Program Team and develop business and technical requirements for submission of environmental data to EPA. These are the traditional CDX customers.
- ***State, Local and Tribal Partners*** – Typically wish to develop a presence on the Environmental Information Exchange Network. Most state, local and tribal partners receive grant money from EPA to help fund projects for the Exchange Network.
- ***CDX Users*** – Environmental rules developed by EPA Program Offices require CDX users to submit environmental data to EPA. CDX users do not typically provide funding for CDX services.
- ***OEI CDX Program Team*** – Works directly with the contractor to develop and deliver CDX services while ensuring project quality, scope, cost and schedule are maintained. Integrates new technologies into CDX services and leads governance of the CDX Program.

1.2 Mission, Vision and Strategy of CDX Branch

The branch that manages the CDX Program for EPA is the Information Exchange Technology Branch (IETB) and it is within EPA's Office of Information Collection (OIC). Listed below are the IETB Vision, IETB Mission and IETB Strategies.

1.2.1 IETB Vision

- To serve as EPA's center of excellence for electronic reporting and exchange of environmental data through the Central Data Exchange (CDX).

1.2.2 IETB Mission

- Support protection of human health and the environment by leading the Agency in electronic data exchange.
- Provide EPA Programs, States, Tribes, and Industry data exchange options to meet their business needs through CDX.
- Create CDX solutions and implement a Service Oriented Architecture in alignment with the Agency's architecture.
- Maintain support services to internal and external customers that are comparable to the best in the business.
- Assist EPA Programs to comply with their federal technical and policy requirements.

1.2.3 IETB Strategies

- Provide technical, contractual, financial, and project management expertise to assist exchange partners in developing data exchanges.
- Work collaboratively with OEI and Program Offices on a consultation basis to support the development and maintenance of data exchanges that meet EPA and federal policies, standards, and regulations.
- Provide expertise to Programs, States, Tribes, and Industry on regulatory programs to assist in dataflow design.
- Serve as a focal point in the Agency for Web services and Service Oriented Architecture activities.
- Communicate CDX support services in a transparent way.
- Keep abreast of federal requirements and guidelines involving project management, security, and investments.

- Implement and maintain security standards, investment, and contractual requirements as specified by federal, EPA, and program requirements.
- Develop and support options for exchange partner registration and authentication alternatives to meet program and regulatory requirements.
- Provide messaging options to assist in informing customers on status of reporting and publishing requests.
- Provide and implement options for complying with the Cross-Media Electronic Reporting Regulation (CROMERR) for all applicable partners.

1.3 CDX Program Initiatives

CDX is currently supporting the flow of data of 60 programs in the Agency. OIC is in the process of expanding CDX and the Exchange Network to support data exchanges with other Federal Agencies and international organizations, as well as provide the infrastructure and expertise for assisting more EPA programs in an evolving electronic age.

1.4 CDX Program as a Solutions Provider

From a business operations perspective, the CDX Program has matured to a point where business processes and procedures are evolving to become more efficient and effective overall. At the center of this evolution is a focus to improve on the operational excellence that CDX Customers are accustomed to receiving from the CDX Program Team.

The CDX Program is the data exchange solutions provider to the EPA and other CDX Program stakeholders. The structure of this task order is meant to facilitate successful management and delivery of CDX services and solutions to CDX customers.

1.5 CDX Development Services Description

CDX provides lifecycle development services to EPA program offices and regions, States, tribal and other trading partners, regulated entities who report and exchange data with EPA, and other stakeholders. "Dataflows" are the applications that effectively establish a new data exchange between, and are developed collaboratively with, EPA OEI, Program Offices, States and other trading partners. Program offices work with OEI and the contractor to define dataflow requirements to develop and maintain dataflows. OEI works with the program office to identify and document the activities, deliverables, and acceptance criteria in developing a dataflow. OEI's goal is that new dataflow projects integrate and utilize existing CDX "core" services and software components, —leveraging service oriented architecture consistent with the EPA's Enterprise Architecture and in accordance with the CDX Life Cycle Management Guide. Many dataflows consist of interconnectivity between a trading partner external to EPA (state, Tribal or local agency or reporting industry), EPA's CDX, and a program application/database located in EPA's National Computer Center where coordination is performed through Application Deployment Checklist procedures.

1.6 Cross Media Electronic Reporting Rule (CROMERR)

The Cross-Media Electronic Reporting Rule (CROMERR) provides the legal framework for electronic reporting (ER) under all of the Environmental Protection Agency's (EPA) environmental regulations. CROMERR applies to: (a) regulated entities that submit reports and other documents to EPA under Title 40 of the Code of Federal Regulations, and (b) states, tribes, and local governments that are authorized to administer EPA programs under Title 40. §3.2000(b) of CROMERR sets standards for electronic report receiving systems operated by states, tribes, and local governments under their authorized programs. These standards cover a variety of system functions, such as electronic signature validation. The standards are designed to provide electronic submittals with the same level of legal dependability as the corresponding paper submittals.

For reports submitted electronically to EPA, CROMERR requires the reports be submitted to the Central Data Exchange (CDX), or to a system designated by the Administrator for the receipt of those reports. On October 13, 2005, EPA published a Federal Register Notice (70 FR 59748) designating as acceptable all EPA systems that were

receiving electronic reports as of that date to continue receiving those reports until October 13, 2007. To receive electronic reports after October 13, 2007, systems other than CDX must be re-designated by the Administrator. Although CROMERR does not subject EPA systems to the standards, EPA has decided that all of its systems will conform to the standards when they operate to receive electronic submittals that are covered by the regulation. In the Preamble to the regulation, EPA commits to meeting the §3.2000(b) standards for its own electronic report receiving systems. CROMERR also requires that states, tribes, and local governments that wish to continue or begin using ER for their authorized programs must revise or modify those programs to incorporate ER. CROMERR details the process to obtain EPA approval of ER-related revisions or modifications to an authorized program. See http://www.epa.gov/cromerr/.

2 CDX Operations and Maintenance (O&M) Tasks

2.1 O&M Services

The Contractor shall be responsible for overall operations and maintenance (O&M) of the environments for CDX development, integration test, pre-production, and the contractor shall provide partial O&M support for the CDX production and research and development environments in accordance with Agency and Federal Information Processing Standards (FIPS). The CDX program is researching ways to, among other things, integrate cloud computing concepts and strategies into the CDX Program in order to gain operational efficiencies, reduce costs and increase agility. The contractor shall integrate cloud computing concepts and strategies into their approach on managing the CDX Program, the various CDX system environments and its related systems and applications. Additionally, the contractor shall integrate IT Service Management best practices and strategies into their task management approach with the goal of improving CDX Program service quality, increasing strategic collaboration among CDX teams and increasing operational efficiencies. The contractor shall also include in their approach how the contractor would "Operatate the CDX Program like a Business". Running EPA IT programs like a business is one of the priorities of EPA's Chief Information Officer.

CDX O&M is documented in Change Control Board (CCB) meetings and regular operations meetings. The contractor shall maintain CDX O&M procedures that are in accordance with the technical and security procedures, CDX O&M Guide, and CDX Contingency Plan. The contractor shall track hardware and software purchases in order to provide status to EPA OEI upon request. The contractor shall provide the following O&M support:

- Procurement and management of hardware, software, and telecommunications resources shall be performed according to FAR and documented.
- Systems integration and implementation of hardware, software, and telecommunications shall be performed according to monthly milestone schedules and project plans for significant activities. Changes to CDX architecture shall be coordinated with the CDX Engineering Board (EB) as outlined in the EB Charter.
- Anti-Virus Scanning and Patchlink Operating System updates shall be managed in coordination with EPA's National Computer Center schedules and promotion schedules.
- Infrastructure monitoring, repair and maintenance shall be performed according to the CDX O&M Guide, CDX Contingency Plan, and performed to CDX Service Level Agreement (SLA) Matrix requirements.
- System performance monitoring shall be consistent with CDX O&M procedures.
- Change control / configuration management shall be performed according to the CDX Configuration Management Plan.
- Tier three help desk support shall be provided on escalated tier one or tier two CDX help desk issues.
- Contingency planning shall be documented and routine testing shall be documented according to the CDX Contingency Plan.

- Database administration shall be performed to ensure the support for CDX and program systems for all database environments as documented in the CDX O&M Guide.

- Regular coordination meetings shall be held between the Contractor with the National Computer Center Networking and Operations to ensure Development and Production environments are maintained in a timely and in a consistent manner.

- CDX Application O&M and Infrastructure O&M support, separation of duties as described in Separation of Duties Guide.

- The Contractor shall provide systems performance monitoring and reporting services for CDX customers. This applies specifically to customers who desire performance reporting that is above the reporting that is normally provided as a part of the standard CDX O&M support.

2.1.1Standard O&M Service Levels

(1) As identified in the Contractor's Communications Plan, the Contractor shall notify EPA within thirty (30) calendar days before the expiration of any renewals on software/hardware licenses.
(2) The Contractor shall act on purchase requests within five (5) business days of receipt of approval on purchase requests from EPA. Contractor shall provide confirmation of purchase to EPA within one (1) business day of purchase.
(3) As identified in the Contractor's Communications Plan, the Contractor shall notify EPA OEI within one hour of any system downtimes / outages that would impact OEI or any stakeholder end user. If directed by EPA OEI, the contractor shall notify effected stakeholders directly.

2.1.2 Node O&M

The Contractor shall support O&M activities for the CDX Node and Exchange Network (EN) dataflows that includes but is not limited to:

- Deploying new CDX Node releases (e.g., server setup and configuration, node setup, unit testing, rolling between DEVTEST PROD environments, quality of service (QOS) monitoring.)
- Supporting versions for Node 1.1.
- Communicating/releasing new versions of NGN software for trading partners,
- Providing periodic testing.
- Identifying, testing interoperability and deploying new versions of supported software to remain current and to ensure adequate support.

2.1.3 Exchange Network Discovery Service (ENDS)

The Contractor shall support O&M activities for the CDX ENDS.

ENDS is a set of web services compliant with the Exchange Network Functional Specification that support the discovery of services and related metadata necessary for node clients and applications to easily provide user friendly query builders against published Network data. Some of the primary Meta data types included is Node, service request, parameters, style sheets available, and costing information. Metadata can be collected directly from the Network nodes and loaded into ENDS automatically via the GetServices query in the Node 2.0 Specification. The ENDS is a network-wide service repository which contains service descriptions for all nodes. ENDS not only offers a set of service publishing services, but also provide service management capabilities.

2.1.4 Data/Document Archiving and Tape Back Up Services

The Contractor shall ensure that all data/documents in CDX and the Data Processing Center (DPC)/Reporting Centers (RC) are archived and/or periodically backed up on tape. Examples of services the Contractor shall provide include the following:

- The Contractor shall provide both on-site and off-site storage for data, files, electronic equipment, and supplies.
- The Contractor shall provide digital scanning and electronic archiving if requested by EPA.
- The Contractor shall backup DPC/RC related systems data files, and any other operating system, application program, and data files critical to the operations of the centers. Timeframe of backups and procedures will be specified by EPA.

The Contractor shall have an offsite storage facility where the Contractor shall maintain the archived monthly backup tapes. The Contractor shall maintain a hard copy log of the Contractor's backup activities and securely store this information. The Contractor shall keep a copy of the log, preferably in a secure offsite location.

2.1.5 Government Owned Property

The Contractor shall maintain a detailed inventory accounting system for Government Furnished Equipment/Material (GFE/M) or Contractor-Acquired-Government Owned Property (CAP). The inventory accounting system must specify, as a minimum: product description (make, model), Government tag number, date of receipt, name of recipient, location of receipt, current location, purchase cost (if CAP), and contract/order number under which the equipment is being used. The Contractor shall either: a) attach an update inventory report to each monthly report, or b) certify that the inventory has been updated and is available for Government review. In either case the Contractor's inventory listing must be available for Government review within one business day of Contracting Officer request.

2.2 CDX Information Assurance and Registration

2.2.1 Information Assurance

The Contractor shall ensure the continued security of the CDX system and development environments. The Contractor shall be responsible for maintaining security of all CDX supported systems in accordance with laws, regulations, policies and procedures.

For new dataflow requirements, the Contractor shall assess the impact of a customer's security requirements on the CDX infrastructure. The assessment could include:

- Type of data
- System sensitivity
- System structure
- Data transmission

The Contractor shall remain cognizant of new directions in Federal/EPA security guidance and CDX technologies; and shall ensure that the detection of new threats and vulnerabilities to CDX are addressed and escalated according to the EPA Security Escalation Procedures and Computer Security Incident Response Capability (CSIRC) procedures.

The Contractor shall keep all security procedure and planning documents that are necessary to maintain the certification and accreditation of the CDX system and development environments current and accurate. The Contractor shall fill out Firewall Rule Change Requests (FRR) and submit them to the EPA. The Contractor shall create and update Security Addendums (SA) to the CDX system security plan. The Contractor shall update the EPA ASSERT system as necessary. Example – When security vulnerability is found in CDX, the CDX Program staff creates an entry in the EPA ASSERT system and the Contractor updates the entry into the EPA ASSERT system.

Security includes but is not limited to:

- Intrusion detection & protection systems
- Firewalls

- Hardware security
- Router
- Bridge
- Switches.

The Contractor shall assess design and development, and implementation of new and existing applications for CROMERR, and recommend and provide procedures, software, and documentation necessary for CDX electronic reporting to be CROMERR compliant. The Contractor shall support the CDX Program's efforts to implement CROMERR in CDX system components and CDX services for CDX customers.

2.2.2 Network Authentication Authorization Service (NAAS)

The Contractor shall support O&M activities for the CDX NAAS.

NAAS is a set of security web services that the Central Data Exchange (CDX) centrally manages. It supports remote administration by the State and EPA Node Administrators. The NAAS provides extensive security services for identity management, user authentication, user authorization, and access control policy management. These services support security for every message on the CDX and the Exchange Network and as such their availability and performance are critical to successful operations.

2.2.3 Cross Media Electronic Reporting Rule (CROMERR) Support

The Contractor shall periodically review current CROMERR solutions and investigate whether advances in technology may be utilized to more efficiently meet the provisions of CROMERR.

The Contractor shall support customers that have dataflows which require CROMERR compliance. That support shall include assisting CDX customers' efforts to complete relevant CROMERR compliance checklists.

The Contractor shall maintain and update documentation, including design documentation, as it relates to CDX-CROMERR solutions. The Contractor shall maintain and ensure the adherence of all established standard operating procedures including, but not limited to, help desk procedures and maintenance of a copy of record of the submission.

2.2.4 CDX Registration

CDX provides a multitude of application registration services that support registration work flow procedures, and integration of identity management, credential management, certificate management, electronic sponsorship management, and access rights management through Web forms and Web Services.

The Contractor shall coordinate all CDX registration components with other CDX services and provide development, integration, and O&M support consistent with CROMERR, CDX Life Cycle Management and CDX O&M.

The key electronic registration components supported by CDX are comprised of:

- Exchange Network Registration –web forms allowing Exchange Network Node owners to remotely administer credentials, access rights, and passwords to the Network Authentication &Authorization Service (NAAS).
- CDX Open Registration –web forms allowing users to identify themselves, request credentials and authorization, and obtain sponsorship forms electronically for applications designated as "Open".
- CDX Pre-Registration –allowing application owners to identify and pre-populate user identities, credentials, and access authorization to applications designated as "Open" or "Closed" and then allow users to validate pre-populated information through Open Registration.
- CDX Closed Registration –allows application owners to restrict users requests for access, openly, and utilize CDX Pre-Registration exclusively for applications designated as "closed".

- CDX Dynamic Registration –a dynamic workflow component enabling owners to specify table-driven criteria necessary to authorize "Open" registration users.
- CDX Registration Maintenance –a web based access rights management tool allowing for remote administration of access rights to role-based applications managed by CDX.
- CDX Exchange Network Integration for Identity Management and Reduced Sign On.
- CDX Digital Certificate Management and Local Registration Authority support for Certificate Authorities.

The Contractor shall provide technical support, coordination, documentation, record keeping, and management for CDX Registration and Exchange Network Registration procedures, as well as, provide PKI Local Registration Authority procedures and management for electronic and paper registration materials and records received. These procedures and materials shall be managed consistent with all applicable laws, Federal standards, Agency policies, and the CROMERR.

2.2.5 Exchange Network Quality Assurance Services

In addition to the Quality Control Plan as outlined under Task Management, the Contractor shall support the Exchange Network Quality Assurance Services. These services are a set of XML web services for validating XML documents against the associated schemas and extended business rules. It consists of two major services:

- Schema Validator: This service verifies the structure of XML documents using definitions in one or more schema files. Basic content constraints are also checked.
- Schematron Validator: This is an optional extension of the Schema service that further validates XML documents using custom business rules, look-up tables, and regular expressions that are not possible with the basic schema validation service.

The purpose of these services is to support data stewards data checking prior to submission to CDX. Because these are Exchange Network SOAP services, they can be easily invoked from applications that are web service ready, and be integrated into automated data submission or processing systems. The services can also be accessed using a web browser. Users can send documents from their desktop and get results either synchronously or asynchronously[1].

2.3 Technical Facilitation and Consulting

The CDX Program leads and participates in various technical meetings on a routine and as needed basis. The Contractor shall provide technical facilitation support to the CDX Program and to CDX customers.

2.4 Elevated O&M Support Services

Some CDX customers require elevated levels of O&M support. That can be caused by a dataflow being categorized as a "critical" system or for other reasons.

The Contractor shall provide elevated service levels to CDX systems. Examples of elevated service levels include but are not limited to:

- 24x7 technical support
- Disaster recovery support

2.5 System Performance Monitoring and Reporting

The performance monitoring that comes with the standard CDX O&M service is defined by the support levels in the CDX O&M Service Level Agreement (SLA). Some CDX customers require additional system performance

[1]For additional information refer to: http://www.exchangenetwork.net/exchanges/air/nei_xml_val.pdf http://tools.epacdxnode.net/

monitoring and some CDX customers also request additional reporting on their systems performance.

The Contractor shall provide systems performance monitoring and reporting services for CDX customers. This applies specifically to customers that desired performance reporting that is above the reporting that is normally provided as a part of the standard CDX O&M service.

3 CDX Development Lifecycle Tasks

OEI works with multiple EPA Program Offices to develop dataflow requirements. Dataflow requirements are sent by the contracting officer to the Contractor and the Contractor then submits a project proposal for that dataflow. After the Contractor's project proposal is accepted by EPA, a Technical Direction Document (TDD) is issued which begins the project. Example – TDD 09.02 Program Management. The contractor's proposal time/costs in response to these dataflow TDD requests are not billable hereunder.

The life cycle for dataflow development for CDX Web and the Exchange Network includes a set of activities that need to be completed to take a flow from conception with a program office to a fully deployed flow in production. This process is referred to as the Data Standard Life Cycle Process (Figure 1).

As part of a continual process improvement, the Contractor shall streamline and reduce costs for the lifecycle for dataflow development. Including but not limited to:

- Simplified documentation. Use generic documentation templates for each flow,
- Standard Services. Generalize common dataflow patterns are generalized such that they can be readily reused on the development of new dataflows.
- Reuse Standard Services. Orchestrate existing standardized services/software components that enable rapid/low cost deployment of standard dataflows that do not require a significant amount of customization).

The goal for using these standardized services and generic documentation is to minimize development costs for individual dataflows.

The Contractor shall adhere to the Data Standard Life Cycle Process for design, development, test, and implementation of CDX dataflow projects. The Contractor shall ensure that all development efforts be compliant with the EPA's Enterprise Architecture. Documentation deliverables shall be provided at each milestone in the process. These activities include but are not limited to the following:

3.1 Document System Requirements

The Contractor shall hold teleconferences and other follow-up communications with the OEI project lead and the program office representative to document the system requirements in a Systems Requirements Specification (SRS).

3.2 Integrated Project Team participation

The Contractor shall coordinate actively and responsively with the Government and other Government designated contractors participating in the design, development, test, implementation, deployment, and operation of CDX. Failure or refusal to coordinate and cooperate with the IPT or IPT member contractors precludes effective performance of this agreement.

The Contractor shall participate on the IPT throughout the entire project lifecycle to ensure efficient and quality development is delivered.

3.3 Establish Cost & Schedule

Based on the requirements and approved SRS the contractor shall prepare a cost and schedule proposal and submit it to the OEI. If the Government agrees to proceed with the development, a Fixed Price or T&M type effort will be

identified and the Government and the Contractor will agree on an approved cost and schedule. EPA recognizes that Fixed Price offerings are traditionally the lowest risk contract type for government projects, hence EPA encourages the Contractor to propose innovative fixed price offerings for CDX projects because historically, most CDX projects have been either T&M or cost-plus contract type.

3.4 Develop System Design

The Contractor shall develop the system design document (SDD) for the transmission of the dataflow through CDX. The contractor shall leverage as much as possible generic documentation that could be utilized for this flow (for Web / Node flows). The design shall utilize existing services and reusable CDX components where possible (including Network Node Services, CDX Lite, etc.), follow CDX and Exchange Network standards, guidance, business practices, and architecture, focus on maximum efficiency and cost effectiveness, and include features needed to ensure adequate system security. Typically, a system architect and an engineering board provide final review of the design.

3.5 Security Planning and Documentation

The Contractor shall work with the OEI project lead and CDX security staff to ensure adequate security planning and documentation. See Section 2.2.1.

3.6 Design Readiness Review

The Contractor shall conduct a readiness review after the design of the dataflow has been completed to ensure that it leverages core services and meets the requirements as described in the SRS. The contractor shall develop the functionality listed in the SRS and the SDD and modify existing code or deploy new code as required. The Contractor shall conduct and present the results of developer testing to the government and turn the developed functionality over to the testing team for formal unit/integration testing.

For any fixed price dataflow effort developed by the Contractor, the costs of any software fixes required after formal unit/integration testing has begun shall be included in the fixed price. For any time and materials dataflow software development effort, the costs of any software fixes required after formal unit/integration testing has begun shall be billable to the Government up to an amount not to exceed 5% of the overall development costs (costs incurred from the acceptance of the SRS through release to the testing team for formal unit/integration testing). Fixes in excess of the 5% maximum cost shall be completed at no additional cost to the Government.

3.7 Unit/Integration Testing

After the dataflow development is completed, the Contractor shall conduct unit and end-to-end integration testing of the different components of the system in CDX. The Contractor shall use test files of actual data that the program office will provide to the contractor.

3.8 Test Readiness Review

A test readiness review is conducted once the application has been developed to ensure the dataflow is ready for testing in CDX preproduction.

3.9 Prepare a Test Plan and Prepare a Test Report

The Contractor shall prepare a test plan to test the requirements identified for the specific dataflow. The contractor shall prepare a test report that identifies what system changes the contractor completed during dataflow testing.

3.10 User Acceptance Testing

The Contractor shall provide support to user groups during testing. The Contractor's support shall include ensuring the specific dataflow and system is fully operational in the CDX preproduction environment and shall monitor the system during this testing period.

3.11 Configuration Management

In moving from development to test to production the Contractor shall use the configuration processes and procedures described in Configuration Management and Change Control and utilize CM implementation processes and procedures for deployment.

3.12 Production Readiness Review

At the conclusion of system testing and the Contractor has made any required changes to the system that were identified during testing, the Contractor shall conduct another readiness review to ensure the system is ready for deployment to production. The Contractor shall complete all readiness checklists during the readiness review and resolve any outstanding issues identified during the readiness review.

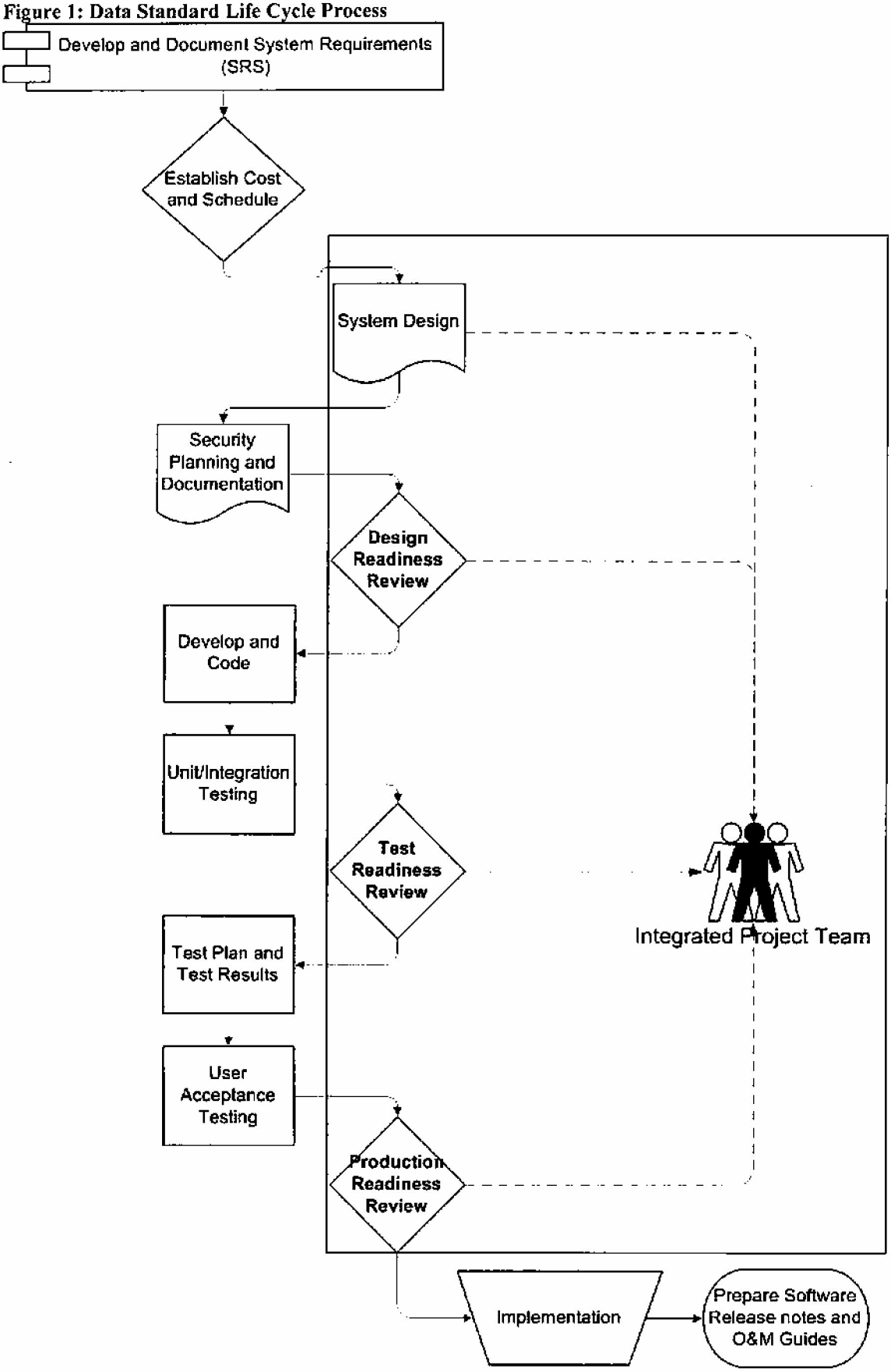
3.13 Successful Implementation

Ensure the successful implementation of the software without impacting other parts of CDX. The Contractor shall update and revise software release notes one time for any contractor developed software. The contractor's notes shall reflect the final version of the software that is moved out of the development and preproduction environments and deployed to the production environment.

3.14 Prepare Draft O&M Guide

The Contractor shall prepare a draft dataflow O&M Guide. The Contractor shall ensure that the operation staff provides input during the readiness review.

Figure 1: Data Standard Life Cycle Process



The Contractor shall serve as a knowledge base for CDX customers by providing procedural and technical guidance on standards previously approved by the CDX Engineering Board.

4 CDX Development Services

In accordance with the Data Standard Lifecycle Process and in compliance with the EPA Enterprise Architecture, the Contractor shall provide the following development services:

4.1 Node Development and Deployment Assistance

The Contractor shall continue the development of the network nodes and node clients and assist EPA program offices and trading partners in deploying nodes.

EPA's CDX, a cornerstone of the Agency's Enterprise Architecture, and the Exchange Network (EN), are built on the use of Web Services and Service Oriented Architecture (SOA). Many key CDX SOA infrastructure components are currently in place or under development including:

- Universal Description Discovery and Integration services
- XML Gateway
- Web Service orchestration using the Business Process Execution Language (BPEL)

These common SOA components are leveraged to provide services for the CDX web site, CDX node, and Exchange Network shared security and quality assurance support. This architecture is being used to support and integrate CDX with Agency SOA initiatives as well such as the Identity and Access Management (IAM) services. Information sharing and data publishing via Network services is a primary goal of the Network and the Office of Environmental Information's Information Access Initiative.

CDX and the EN dataflows utilize many of these services to exchange data and messages among Network trading partners that are based on a common specification for reusable software components known as Network Nodes. Network Nodes are developed as both open source and proprietary software deployed by trading partners on the Network. The behavior of Network Nodes is defined in the Network Node Functional Specification. The EN trading partners are upgrading their nodes from supporting the initial Node 1.1 to the recently published Node 2.0 Specifications. CDX currently supports both version of the node in order to support state and internal EPA office nodes transition efforts.

CDX maintains nodes running on BEA WebLogic (Node1.1), JBOSS (Node 2.0), and SQLDATA Soap server (Node 1.1/2.0 - Network Authentication and Authorization Services and Quality Assurance services). In addition, a .NET /Windows Workflow Foundation based node is being evaluated for use on the Network.

Listed below are the main types of nodes provided to trading partners:

- Full Nodes can both request data from the Network, as well as publish data to the Network in response to requests (e.g., a query or solicit) from other Network Nodes. Full nodes can potentially leverage the full capabilities of the Network for machine-to-machine interaction by sending requests for data, and publishing data for use by other Network partners.
- Node/Network clients or "Network Desktops" can submit, request, and receive results from a request to a full node, but they cannot listen for/respond to queries from other nodes and as such cannot publish data on the Network. These clients are primarily for human-to-machine interaction and are normally used by trading partners that do not publish to the network.
- Demonstrated Node Configurations are essentially the messaging layer of a node that has been tested for each major platform and made available for developers to build interoperable Nodes around.

- Software Developer Kits are also available to integrate Network services into applications. It simplifies Network access down to a few lines of script that can be inserted into any application.[2]

The Next Generation Node (NGN)[3] is a full node implementation in JAVA that contains all of the software components that are required to host an Exchange Network node from messaging to transaction management and auditing. EPA provides open source Nodes, both Java and .Net Versions, to trading partners. The JAVA version called the NGN is supported for a variety of application server platforms including JBoss, Oracle, Websphere, Tomcat and BEA Weblogic. EPA's Network Nodes allow integration of a variety of other services and applications. For example, the current NGN includes integration of an open source Velocity mapper that can be used by trading partners to map to their database to create XML files for exchanges or as publishing services. EPA assists trading partners and EPA Program Offices in deploying these nodes. Support for these applications is handled through the node and CDX help desks. Third tier help desk support for the node help desk and CDX help desk shall be provided by the Contractor.

4.1.1 Node Development

The Contractor shall support development activities to support the CDX Node and EN dataflows that includes but is not limited to:

- Provide standard development and lifecycle management of each CDX and EN dataflow.
- Improve existing NGN functionality by leveraging services and other reusable components (e.g., NAAS, IAM, QA, Standard Audit, Logging, and Workflow monitoring).
- Facilitate more rapid and lower cost node deployment through the use of configuration driven service development and the use of streamlined development tools and procedures (e.g., BPEL orchestration, generalized common dataflow patterns).
- Port the NGN Node as necessary for other State platforms.
- Evaluate and develop new methods, tools and procedures to simplify dataflow creation, new services and data publishing to reduce cost and time to market.
- Port dataflows from node 1.1 to node 2.0 in support of partner upgrades.
- Integrate with other Agency SOA components.

In order to reduce costs for future NGN dataflows, the Contractor shall standardize common dataflow patterns such that they can be readily reused on the development of subsequent NGN dataflows. The types of reusable actions / workflow activities include (e.g., integrate Solicit into generic NGN dataflow to provide application support for launching publishing services (i.e., Velocity Mapper), transforming results, and providing results to the service requester).

4.1.2 Node Deployment Assistance

The types of node flow configurations deployed for a particular dataflow vary, but (depending on the complexity of the business process, timeframe, and funding) reflect one or many of the following:

- Trading Partner Full Node ↔CDX Node ↔ Program Full Node
- Trading Partner Node Client ↔ Full CDX Node ↔ Program Full Node
- Trading Partner Node Client ↔ Full CDX Node ↔ Program Node Client

The Contractor shall assist EPA and other trading partners as requested in installing, configuring, and using Nodes for their data exchanges including:

- Meeting with program office support teams to provide current information on the Exchange Network, Agency SOA initiatives, CDX standard services and processes, and consult on requirements, architecture, and design in support of the other support team's dataflow.

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[2] For more information on Nodes and Node Clients see http://exchangenetwork.net/node/index.htm.

[3] The NGN distribution information, design, and tools can be found at https://test.epacdxnode.net/ngn.

- Reviewing available documentation, (e.g., process/architecture diagrams, requirements, design) to ensure that the solutions proposed by the internal developers/operations teams are consistent with CDX's and EN business practices and architecture. The contractor's input and comments shall recommend making best use of reusable CDX components; identify specific CDX and EN standards and guidance items that are not, (but should be), used in these documents; and identify requirements and design features needed to ensure adequate system security.
- Performing analysis of key infrastructure components (e.g., Universal Description Discovery and Integration services, the XML Gateway and web service orchestration using BPEL) to optimize and integrate these services whenever possible.
- Assisting the State or EPA office in installing and demonstrating potential software solutions for Network dataflows that may include coordination with other support teams by providing code, installing and running these potential solutions in the dataflow environment(s).
- Coordinate across internal development teams to ensure all teams are kept up to date on changes in software, procedures, environments, and services.

The Contractor shall review existing CDX Node and EN Node implementations in order to identify critical issues. Contractor shall also identify and review relevant emerging and new technologies in Web Services, SOA and business process management. As agreed upon by the Government, the Contractor shall prototype and evaluate new products, and make recommendations for improving the overall efficiency and maintainability of CDX and the EN.

4.2 Data Publishing

CDX defines Data Publishing as a framework of web services that make data available for consumption by end users from EPA data stores through the Exchange Network. Network partners are encouraged to publish data to make it more widely available. EPA and CDX are making a concerted effort to make data available through data publishing services. Two systems, the TRI State Data Exchange and the Air Quality System (AQS) have publishing services available through the EPA node.

The Contractor shall develop and maintain web services that operate through the CDX node and make data available to end users and consumers. Publishing services shall include those that operate on a push model, such as in the TRI state data exchange, and a pull model, such as Facility Registry System (FRS). Push model services include web services such as submit. Examples of pull model services include query and solicit. Services shall be fully compliant with the exchange network specifications and protocols. The Contractor shall develop monitoring capabilities that will allow EPA to track data publishing transactions, including the success or failure of that transaction. The contractor shall develop, maintain, and update, as necessary, all documentation detailing publishing services.

4.3 Web Development Services

In 2009 CDX supported more than 130,000 submissions and more than 2 million transactions with external parties that conduct business with the Agency in over 40 Programs. OEI provides a web interface that supports a significant portion of these user submissions and other data exchanges with EPA and external entities.

The Contractor shall support development and operations activities to support the web-based components of CDX. This may include the following:

- Conducting functional, technical, and user requirements.
- Designing and developing web-based dataflows in accordance with all applicable federal and EPA laws, regulations, policies and procedures.
- Conducting multiple levels of testing and assisting EPA program offices in the testing process.
- Conducting production readiness reviews.
- Deploying web dataflows.

The Contractor shall also provide consulting services to programs that elect to build themselves components of a web-based dataflow that will be hosted on CDX. The Contractor shall serve as a knowledgebase for program

customers and their contractors to provide procedural and technical guidance and standards previously approved by the CDX Engineering Board.

4.3.1 Web Application Development

CDX-Web hosts approximately 30 web applications on a variety of platforms that interface with web forms and other systems and services. The purpose of these applications is to support the submission and exchange of data with EPA and external parties.

The Contractor shall support web application development activities that interact with CDX forms and services according to Development Life Cycle procedures. This may include conducting functional, technical, and user requirements specifications; designing and developing applications in accordance with all applicable federal and EPA laws, regulations, policies and procedures; conducting multiple levels of testing and assisting EPA program offices in the testing process; conducting production readiness reviews and deploying applications; and making post-production enhancements/bug fixes as part of a dataflow or related project.

The Contractor shall also provide consulting services to programs that elect to build themselves components of a web-based dataflow application that will be hosted on CDX. The contractor shall serve as a knowledgebase for program customers and their contractors to provide procedural and technical guidance and standards previously approved by the CDX Engineering Board.

Development technologies include: J2EE, ASP.NET, Oracle, Lotus Notes, and Cold Fusion with a focus on JCE cryptography.

4.3.2 Web Form Development

CDX contains multiple web interfaces for users to submit and exchange data with EPA, many of which are web forms. As of March 2010, CDX supported web forms for about 40 different EPA programs. In the past, OEI had an average increase of five to 15 new programs a year. Based on new requirements and additional programs serviced by EPA, these web forms require changes or new forms are built to support additional programs. In addition, the core CDX infrastructure includes forms associated with user registration, administration and provisioning.

The Contractor shall support web form development activities that interact with CDX services. This may include conducting functional, technical, and user requirements; designing and developing web forms in accordance with all applicable federal and EPA laws, regulations, policies and procedures; conducting multiple levels of testing and assisting EPA program offices in the testing process; conducting production readiness reviews and deploying forms; and making post-production enhancements/bug fixes as part of a dataflow or related project.

4.3.3 CDX Lite

CDX Web is comprised of several web based services which have been consolidated to provide a complete table-based, custom, electronic reporting solution. CDX Lite is comprised of the following:

- Client-based Designer Tool
- CDX Web based Design Submission
- CDX Web design review and approval application
- CDX Lite Registration Provisioning tool

The CDX Lite components allow customers to design and submit requirements to be published as meta-data into CDX and incorporate:

- Screen wording
- Submission and connection criteria
- Web services
- Functions to fully implement CDX Web dataflows

The Contractor shall provide technical support to develop and integrate new CDX Services into CDX Lite.

The Contractor shall provide support for CDX customers that want to establish a CDX Lite dataflow. CDX Lite electronic data exchange support shall include the following:

- Design
- Submission
- Review
- Test
- Publication
- Operational maintenance (Refer to CDX O&M Services)

The Contractor shall ensure CDX Lite dataflows are designed, developed and maintained in accordance with:

- CDX Development Life Cycle procedures
- CDX O&M procedures
- Cross Media Electronic Reporting Rule if applicable to that specific dataflow

4.3.4 Shared Services

The Contractor shall support Shared Services and assist Shared Service developers in deploying enhanced services as necessary.

The Contractor shall support O&M activities for the Shared Services that includes but is not limited to:

- Deploying new service releases (e.g., server setup and configuration, node setup, unit testing, rolling between DEVTEST PROD environments, quality of service (QOS) monitoring
- Communicating/releasing new versions of shared service software
- Periodic Testing
- Identify, test interoperability and deploy new versions of supported software to remain current and to ensure adequate support. Routine maintenance activities are described under O&M services task.

The Contractor shall provide last tier operational support for the Shared Services including: the Universal Description and Discovery Integration Services (UDDI), Client Central Services, the Exchange Network Discovery Services, the Network Desktop tool, the Network Authentication / Authorization Services (NAAS), and the Quality Assurance Services (QA) as required. Support issues associated with other application integration, schema and Schematron deployments as they are necessary. Assist in the redeployment of these services in the various CDX and NCC environments based on the ongoing hardware refresh activities.

The XML Gateway is a message filtering appliance that is deployed in front of CDX application servers to block invalid messages routed to CDX, selected states, and Exchange Network Services. Valid Network message structures and schemas are loaded into the gateway and used to parse the incoming messages. It will serve as a gateway router for State Nodes that are only accessible by CDX.

The Contractor shall develop, maintain, and update, as necessary, all documentation detailing EN shared services.

4.4 Reporting Centers (RC)/Data Processing Centers (DPC)

RC/DPCs receive, process, record, store and distribute print and other electronic media.

4.4.1 Reporting Centers (RC)/Data Processing Centers (DPC) Support

The Contractor shall be responsible for configuring, installing, and maintaining data entry and processing systems and all of associated modules and equipment in optimal working condition. The contractor shall follow hardware and system operations procedure guidelines as stated in various EPA documents. The Contractor shall maintain any DPC/RC related systems at an optimal working condition during normal business hours (8:00 a.m. - 5:00 p.m. Eastern Standard Time) on all normal business days unless otherwise directed by EPA. The Government considers optimal working conditions as ones that do not impede or stop data entry or production processing during 99 percent of normal business hours. The Contractor shall exclude downtime resulting from specific technical directions from the EPA for the halting of data processing and data management activities.

The Contractor shall receive the current documentation from EPA on the required Standard Operating Procedures (SOPs) for each of the programs that operate a DPC/RC and shall follow those procedures as directed. The Contractor shall suggest enhancements to the procedures but shall not implement unless at the direction of EPA. The Contractor shall be responsible for maintaining and updating all procedure documentation upon receipt, as required.

The Contractor shall provide comprehensive systems life cycle services for all software application systems in the DPC/RC and shall ensure that all system-related products produced under this order have adequate documentation. The Contractor shall refer to the Data System Development and System Life Cycle Maintenance section of this SOW for information regarding the regarding EPA system life cycle requirements. The Contractor shall ensure that the Contractor maintains a high degree of interaction between the Contractor's technical staff and the Contractor's project managers while performing these services.

The Contractor shall provide design recommendations as well as ideas for the development and implementation of major enhancements. The Contractor shall include suggestions for where existing development, systems or processes can be leveraged or adapted to maximize cost savings, where feasible, to the Government.

The Contractor shall identify innovative technologies that exploit web capabilities to streamline the collection and dissemination of environmental information to stakeholders. Contractor shall identify mechanisms to publish data in appropriate formats to address the analysis in response to stakeholder queries.

The Contractor shall inventory, manage and maintain all property required for the operations of the DPC/RC including items such as computers, furniture, office supplies, etc.

4.4.2 Submission Receipt and Identification

The Contractor shall:

- Receive, identify, process, and track all submissions to the DPC/RC. The contractor shall receive submissions via a Post Office Box, as regular mail, or commercial express mail, and fax transmissions.
- Receive and process (e.g., date stamp and identify document type) all mail addressed to the DPC/RC.
- Pick-up and deliver documents to EPA.
- Open, date stamp (with the date of receipt at the EPA RC) and process all "official" incoming mail.
- Maintain processing procedures that include document identification, document labeling (i.e., bar coding), placing materials (whether forms, disks, or other communications) in folders, recording postmark and received dates per received package, and entering the information into the Records Management System.
- Assist EPA, as required, in the distribution of EPA mailings through the DPC/RC.
- Assist with electronic a print correspondence with end users, including e-mailing responses to requests.
- Perform the entry of data from paper/magnetic/optical media into repository databases.
- Support Data capture, identification, verification, reconciliation and validation.
- Maintain responsibility for handling and acknowledging Claims of Trade Secrecy (Trade Secret documents) under EPCRA Section 313.

4.4.3 End User Support and Troubleshooting

The Contractor shall:

- Provide user and technical support services as defined and prioritized by the EPA to the user community by answering questions, responding to requests for documentation, and providing required help.
- Respond to requests for assistance directly from users, or EPA may refer them to the contractor.
- Respond to all inquiries within one (1) business day. The contractor shall notify users who leave messages that it is EPA's goal to respond to their inquiry within one (1) business day.
- Develop standard form answers for hotline and e-mail questions.

4.5 Systems Development Lifecycle (SDLC) Advocate

The Contractor shall provide an O&M team member to act as the SDLC Advocate and be involved with all development efforts, from the beginning, to ensure that all efforts in CDX are following proper development guidelines. Once the development effort is ready to launch into the production environment, the Advocate will inspect the dataflow to ensure the code is acceptable and maintainable with minimal effort. Tasks of the Advocate shall include the following:

- IPT participation.
- Evaluate cost and schedule estimates to ensure they are fair and reasonable for the size and complexity of project. The Advocate shall make recommendations to proceed at a Fixed Price or as a T&M effort.
- All documentation including test scripts and design documents are complete and acceptable.
- Code has been tested and results documented.
- EA compliance.
- Maintenance documentation is complete and usable.
- Ensure transition from the development team is satisfactory and all members of the O&M team are trained including help desk and infrastructure support.

4.6 Dedicated Hardware and Software

CDX stakeholders may require specialized hardware and software be supported due to unique needs or to reduce risk in the primary CDX system environment. This is an exception to the normal practice. Based on the requirements of CDX stakeholders' dataflows, the contractor shall analyze the various facets of a dedicated environment construct.

The Contractor shall analyze the impact of supporting a dedicated environment for a specific customer which could include custom or dedicated:

- Hardware
- Operating system
- Custom application
- Physical environment

The Contractor shall clearly delineate CDX infrastructure from the program specific dedicated environment and document these components. The Contractor shall build out these environments as directed by EPA. Additionally, the contractor shall maintain these environments under Task 2.0 in accordance with EPA and program established practices and documented policies.

4.7 Systems Engineering

CDX System Engineering support includes activities related to the growth, interoperability, and extension of the CDX service oriented architecture. It revolves around research and development of new engineering approaches.

These consulting services are coordinated through the CDX Engineering Board (EB) and all activities are approved and managed by the chair of the engineering board. Current areas of CDX research include SOA technologies and new web 2.0 technologies.

The Contractor shall provide systems engineering support including, but not limited to the following activities:

- Attendance and general support for the weekly EB activities and the monthly Web Services Community of Interest.
- Identification/tracking of high-level dataflow development project milestones.
- Support consistent application of CDX engineering standards across CDX.

Work products in this area could include generating best practice guidelines and engineering-related reviews.

The Contractor shall support CDX research activities. The contractor shall support efforts to look at emerging technologies in order to determine suitability for future use on CDX. This research will generally involve special investigations and presentations to the CDX EB.

5 CDX Development Integration Testing

The Contractor shall provide the following testing services:

Unit/Integration Testing.

After the dataflow development is completed, the contractor shall conduct unit and end-to-end integration testing of the different components of the system in CDX. The Contractor shall use test files of actual data that the program office will provide to the Contractor.

Test Readiness Review.

A test readiness review is conducted once the application has been developed to ensure the dataflow is ready for testing in CDX preproduction.

Prepare a Test Plan and Prepare a Test Report.

The Contractor shall prepare a test plan to test the requirements identified for the specific dataflow. The Contractor shall prepare a test report that identifies what system changes the contractor completed during dataflow testing.

6 Additional Tasks

6.1 Routine Data Exchange Upgrades

On a regular basis, individual dataflows within CDX require routine upgrades to enhance the functionality of the dataflow. These upgrades are usually made on an annual basis and are typically in response to one of several things:

- Changes in information collection requests (ICR).
- New regulations that must be implemented within existing systems.
- Changes determined necessary by the sponsoring program as a result of user comment.
- Changes in technology that would result in an improved operation of an existing dataflow.

Examples of changes could include things such as adding an additional field to a web form, additional data quality checks, or new security features.

The Contractor shall develop capabilities or modify existing systems to accommodate changes to data exchanges. These changes are expected to add new functionality or technology to the existing system and are not considered to be a complete redevelopment of the system.

The Contractor shall use coding practices that limit the amount of re-coding necessary when additional functionality is added as a result of a routine data exchange upgrade. The contractor shall update existing system documentation to reflect any changes as a result of routine data exchange upgrades.

6.2 Training for CDX Users

The Contractor shall provide instructional guidance for end-users of CDX dataflows.

Types of training provided could be, but are not limited to:

- Print products/manuals
- Online text tutorials
- Online video tutorials
- Live web conference training sessions
- In-person, on-site training sessions

The Contractor shall conduct post-training surveys/assessments and provide results to the CDX Team.

6.3 Shared Services O&M and Deployment Assistance

The Contractor shall continue the O&M of the Shared Service and assist Shared service developers in deploying enhanced services as necessary.

The Contractor shall support O&M activities for the Shared Services that includes but is not limited to:

- Deploying new service releases (e.g., server setup and configuration, node setup, unit testing, rolling between DEVTEST PROD environments, quality of service (QOS) monitoring.
- Communicating/releasing new versions of shared service software.
- Periodic Testing.
- Identify, test interoperability and deploy new versions of supported software to remain current and to ensure adequate support.
- Routine maintenance activities.

The Contractor shall provide last tier operational support for the Shared Services including: the Universal Description and Discovery Integration Services (UDDI), Client Central Services, the Exchange Network Discovery Services, the Network Desktop tool, the Network Authentication / Authorization Services (NAAS), and the Quality Assurance Services (QA) as required. Support issues associated with other application integration, schema and Schematron deployments as they are necessary. Assist in the redeployment of these services in the various CDX and NCC environments based on the ongoing hardware refresh activities.

6.4 Database Management Services

Typically CDX customers' dataflow databases and data tables are hosted and maintained outside of the CDX environment. A few customers choose to have their systems hosted and maintained within the CDX environment.

The Contractor shall provide database management services to those customers that choose to keep their database and/or data tables within the CDX environment. All processes, procedures and service levels associated with standard CDX O&M service offering still apply.

Under Database Management Services the Contractor shall:

- Provide assistance in the querying of the databases for the purposes of returning information requested by EPA.

- Conduct an active system maintenance program for the DPC/RC databases and related applications.
- Perform regular database verification and validation routines and procedures to ensure the integrity of tables, files, and related systems.
- Administer and perform diagnostic testing to identify problems within the databases and related applications.
- Maintain responsibility for reliable, available and effective database management of the databases and related applications and shall ensure a secure platform that delivers optimal performance.

The Contractor shall ensure the appropriate implementation and execution of the following database administration functions:

- Installing and upgrading the database software and options.
- Creating tables and indexes.
- Creating and managing table spaces.
- Managing control files, online redo logs, archived redo logs, job queues, and server processes.
- Creating, monitoring, and tuning data loading procedures.
- Adding users and groups, and implementing security procedures.
- Implementing security, backup, and recovery plans.
- Monitoring database performance and exceptions.
- Reorganizing and tuning the database.
- Troubleshooting database problems.
- Coordinating with appropriate vendor customer support services.
- Upgrading and migrating database software to current and supportable releases and versions.
- Performing regularly scheduled system and database backups.

6.5 Outreach, Communication and Governance Support

The CDX Team requires outreach and communications support to the CDX stakeholder community. The Contractor shall prepare materials for internal and public consumption and those materials could be in the form of paper, web-based or other form. The Contractor shall also provide support to CDX governing bodies that address CDX related issues. Examples of governance support include preparing agendas, meetings notes, and action items.

6.6 Enhanced Financial Reporting

Enhanced financial reporting is defined as reporting that is above the standard reports provided to customers by the CDX Program. The CDX Program offers enhanced financial reporting to customers as requested. The enhanced reports are custom for each customer and will vary. Examples of enhanced financial reporting typically requested by customers include:

- Traditional or modified Earned Value Management (EVM)
- Weekly or Monthly Financial Reporting of CDX Services
- Return on Investment Reports
- Data calls for Capital Planning and Investment Control input
- Data calls for OMB Reports

As directed by EPA, the Contractor shall provide enhanced financial reporting services. Reporting services provided to EPA will depend on CDX customer financial reporting requirements.

6.6.1 Earned Value Management System

An example of enhanced financial reporting is earned value management support. If requested by the CDX customer, the Contractor shall use traditional EVMS to manage a specific dataflow effort. EVMS is recommended for development efforts exceeding five hundred thousand dollars.

"EVMS", as used in this statement of work, means a project management system used by the contractor that effectively integrates the project technical scope of work with schedule and cost elements to improve project planning and control. The contractor's EVMS must conform to the characteristics described in American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA) Standard-748-A -1998, Earned Value Management Systems. A copy of the standard is available from American National Standards Institute (http://webstore.ansi.org and 1-212-642-4900).

Earned value is best measured using discrete measures of progress. There are a relatively small number of industry-accepted methods of measuring earned value. Most are alternatives for use in measuring the earned value for discretely measurable work packages. Other methods of earning value, such as the so-called "level of effort" and "apportioned" measures are used where there are no clear, objective, discrete measures available. The use of these measures is discouraged by industry best practice, but, at the same time, unavoidable for certain classes of work. Specifically, those tasks which resist discrete measures of earned value are tasks where broadly defined technical support services and rapid responses to dynamically defined specific requirements are acquired. The contractor shall use discrete measures of earned value whenever it is reasonable to do so.

For certain activities (work packages), prospective contractors may not have appropriate metrics at hand in order to make accurate estimates and to be in a position to use discrete measures of performance necessary to manage using a robust EVM plan. For these reasons, EPA will allow more subjective measures of earned value to be used in some work packages under this SOW during the base year period of performance. If so, during the base year period, the contractor is required to develop the metrics that will allow the majority of the activity under the SOW during any option year periods to be planned in work packages for which objective, discrete measures of earned value can be used. The contractor shall consult and collaborate with EPA in developing the metrics during the base year that are intended to support option year discrete measures of earned value and report monthly on the values of metrics collected.

The Contractor shall use an EVMS to provide the following project status data on a monthly basis as part of the monthly status report (all metrics are project-to-date cumulative values unless otherwise stated):

- **Measurement Data**

  BCWS – The budgeted cost of work scheduled (planned value)
  $BCWS_{curr}$ – The BCWS for the most recent month
  BCWP – The earned value of the work actually performed (earned value), the physical (measurable amount (in dollars)) of work completed
  $BCWP_{curr}$ – The BCWP for the most recent month
  ACWP – The actual cost of the work performed (actual cost of work)
  $ACWP_{curr}$ – The ACWP for the most recent month

  Cost/Curve Graph – A graph plotting BCWS, BCWP, and ACWP on a monthly basis from inception of the contract through the month just ended, and plotting the BCWS curve to the budget at completion (BAC) value

- **Variance Data**

  Cost Variance (CV) – The between earned value and actual cost of work performed [CV = (BCWP-ACWP)]
  Schedule Variance (SV) – The difference between the earned value and the planned value [SV= (BCWP-BCWS)]

- **Performance Index Data**

  Cost Performance Index (CPI) – The ratio of the earned value to the actual cost [CPI = (BCWP/ACWP)].
  Schedule Performance Index (SPI) – The ratio of the earned value to the planned value [SPI = (BCWP/BCWS)]

- **Variance Percentage Indicators**

Cost Variance % (CV%) – The Cost Variance (CV) expressed as a percentage of the earned value [CV% = (CV/BCWP)*100]
Schedule Variance % (SV%) – The Schedule Variance (SV) expressed as a percentage of the planned value [SV% = (SV/BCWS)*100]

- **Estimates At Completion and Completion Variances**

  EAC_1 = ACWP + (BAC – BCWP) / CPI
  EAC_2 = ACWP + (BAC – BCWP) / (CPI*SPI)
  EAC_{PM} = ACWP + Contractor's current estimate to complete (ETC) the project
  VAC_1 = BAC – EAC_1
  VAC_2 = BAC – EAC_2

The Contractor shall report the above EVM metrics in a table containing a column for each of the six most recent months' values and one row per metric.

The Contractor shall include an analysis of significant EVM variances on a monthly basis as part of the monthly status report as requested.

The Contractor shall support and participate in integrated baseline reviews and reviews of all relevant EVM data as requested by EPA customers.

6.7 Systems of Registries Development Support

The purpose of this task is to develop and integrate software for the System of Registries and the Data Standards (DSB) web site on both the Internet and EPA Extranet that enhances and expands DSB services. Solutions will continue to enable stewardship of individual registry contents by program offices and EPA partners. Work will support collaboration by communities of interest in order to develop registry contents and data standards. It will elevate the visibility and access of EPA data standards and associated processes to the EPA community and its developers. It will allow DSB customers to clearly understand and access DSB services. It will support the EPA enterprise architecture by providing tools for enterprise and system architects performing Service Oriented Architecture (SOA), data architecture, applications architecture, and data standards integration. Most importantly it will allow EPA program offices, regions, and partners to integrate their systems and services with the metadata contained in the registries in an automated way. This will allow EPA's registries to remain current. Users of EPA systems will have direct access to metadata which will assist them in determining the appropriateness and quality of data they may wish to use. Use of metadata managed in the registries will facilitate the general understanding of the meaning of environmental data, both structured and unstructured.

The Contractor shall design, develop, test (unit, integration, and user acceptance testing), and deploy system and capabilities in accordance with EPA policies, guidelines, and standards. The Contractor shall provide documentation as appropriate according to best practices and the deliverable list. The Contractor and EPA will jointly review the deliverables, in working sessions, prior to final submission to the Government. When applicable, systems and databases shall be compliant with the ISO 11179 standard.

One goal of the System of Registries is to make the creation, delivery, and use of metadata and terminology transparent to the end user of environmental information. Source information, definitions and meanings may appear to the user as needed. In some cases systems and registries may be updated and kept current without human intervention. The end user may be a user of the EPA Internet or Extranet, a user of an EPA system or document repository, or in some cases the user of partner or Federal system. The Contractor shall also design, create, test, document and register (in the Reusable Component Services) metadata and terminology web services in support of EPA, its partners, and the public as they retrieve, translate, validate, use, or present environmental information. On occasion, work shall include upgrades to COTS software, bulk loads for TSCA substance inventory, registry contents management, architecture support and outreach support.

The services and systems to be developed are expected to include:

- Code translation services as data is moved across the Exchange Network

- Code (including substance) validation services as data is imported into Federal, EPA or partner systems
- Reference (active metadata) services (including substance metadata) for users of Federal, EPA, and partner systems (available within the customer systems)
- Code (including substance) notification and/or update services (push from the registries to EPA and partner systems that use data registry contents including items such as standards, data dictionaries, and code sets)
- Keyword update services for the EPA Enterprise Content Management System (ECMS) and other EPA and partner systems
- Classification scheme and taxonomy and other terminology update services for EPA and partner systems
- Search and retrieval services based on concept and meaning for document (unstructured data) systems
- Search and retrieval services based on concept and meaning for structured database systems
- Presentation services for code sets (including substances), dictionaries, vocabularies and other metadata and terminology (to allow visibility from within web sites or systems)
- Tool Evaluation and Design for Reusable Component Services
- Design, Development, Testing, and Integration of Data Set and Models Registration and Inventory Services
- Integration of Geospatial Tools, Technologies, and Resources with the System of Registries.

6.8 Geospatial Services

Geospatial data are those data that are placed based- including locational, geographical and associated place-based attributes that facilitate the use of these data in a geographic context. Typically they are described as points, lines, polygon "vectors" or digital images known as "rasters". These data are exchanged through widely used proprietary formats and services or increasingly through the use of Geographic Markup Language (GML) and Geospatial Really Simple Stuff (GeoRSS). Geospatial data tend to be complex, and because of this, they are typically accessed, analyzed and managed through Geographic Information Systems (GIS) technologies for mapping, modeling or routing purposes. Geospatial Services include the functions and associated technologies associated with the storage, search, discovery, access and exchange of geospatial data.

Over the last decade, there has been a virtual explosion in the interest and capabilities to integrate environmental data to a spatial context. Whereas CDX was never considered a "geospatial system", aspects of CDX support to the states, regulated entities and the public have inevitably led CDX to incorporate limited geospatial tasking into their overall services. Some examples of past support include:

Facility Registry System Update Service (FRS US)

In this service, FRS data are presented to a regulated entity or other register users through a web-based visualization/mapping service (currently it is Google Earth) and the user is allowed to submit edits to that location using the mapping interface. By offering this service, EPA is able to collect more accurate locational data simply and effectively on facilities.

GeoFinder Exchange Network Project

Geospatial analysis depends on rapidly gathering and integrating widely disparate information on places and presenting this on a map. One of the major obstacles to the geospatial community has been the shortcoming of existing search engines to crawl for geospatial data and metadata. The GeoFinder project leverages CDX security (NAAS) to search geospatial metadata catalogues across agencies.

Heartland Emergency Response Exchange Geospatial Services

These services are critical during emergency responses, where responders need rapid access to widely-diverse state, local and federal data to make "on the ground" decisions. CDX has helped support an Exchange Network project to tie Exchange Network dataflows to visualization capabilities like Google Earth.

With rare exception, EPA's programs, regions and research operations use geospatial data, but geospatial technologies for analyzing these data aren't used widely. Over the next decade this is going to change, to the point that geospatial data services could become a central focus of CDX.

For the purposes of this contract, geospatial data should be considered another type of "Dataflow" that could take advantage of the full range of CDX services. These services include:

- Business Support Services
- Primary and Additional Development Services
- Primary and Additional Operations and Maintenance Services

In the development of geospatial dataflows, the Contractor shall take advantage of the use of Open Geospatial Information System Consortium (OGC) standards (http://www.opengeospatial.org/) for search, exchange and publishing of geospatial data. The Contractor shall also take full advantage of existing Federal (http://gos2.geodata.gov/wps/portal/gos) and EPA (http://www.epa.gov/geospatial/data.html) infrastructure, policies and standards for geospatial data and metadata.

7 Task Management

The Contractor shall designate a single Program Manager (PM) to serve as the Contractor's primary point of contact for all CDX activities and issues. The Contractor shall ensure that its PM provides sufficient management of this task order to ensure that tasks are performed efficiently, accurately, on time, and in compliance with the requirements. The Contractor PM shall coordinate as necessary with Government representatives to ensure that the task is managed consistently with overall contract requirements. The Contractor PM shall ensure timely and accurate submission of deliverables and invoices. Contractor shall identify opportunities to streamline and minimize costs where possible, while improving services (e.g., for processes, procedures, services, system architecture and dataflow, design, testing, and implementation).

Supporting services to the Contractor's business including but not limited to accounting, clerical, executive management, and business development are not chargeable to the Government as they are included in the contractor's fully burdened rates. Management activities specific to a dataflow development effort shall be recorded and charged specifically to that effort. Additionally, the contractor shall integrate IT Service Management best practices and strategies into their task management approach with the goal of improving CDX Program service quality, increasing strategic collaboration among CDX teams and increasing operational efficiencies. The contractor shall also include in their approach how the contractor would "Operatate the CDX Program like a Business". Running EPA IT programs like a business is one of the priorities of EPA's Chief Information Officer.

7.1 Reporting

7.1.1 Monthly Progress Report (MPR)

The Contractor shall ensure that a MPR is submitted outlining the progress, status, and any problems/issues encountered in the performance of this task order. The Contractor shall require all sub-Contractors to provide input to the MPR where there are critical or significant tasks related to the prime order. Critical or significant tasks shall be defined by mutual agreement between the Government and Contractor.

7.1.2 Monthly Financial Report (MFR)

The Contractor shall provide a MFR detailing expenditures and billings on a monthly basis. Format for the report includes a single, consolidated report detailing expenditures and hours by task, sub-task, and dataflow and labor category.

7.1.3 Ad-hoc Reports

The Contractor shall provide additional reports or data as requested by the Government. Reports and data calls may include but are not limited to metrics, performance measures, strategic plans, guidance documents etc.

7.2 Resource Plan

The Contractor shall provide a Resource Plan that outlines staffing and physical assets management, including the Contractor's plan to retain adequate, qualified staffing for EPA, processes for resolution of priority and resource conflicts, the approach to collaboration, flexibility, creativeness, responsiveness, willingness to change, and innovative solutions. The Plan shall also include a transition plan for key personnel in the case of changes to the personnel during the contract performance. A draft Plan shall be delivered with the contractor's proposal submission and the final draft of the Resource Plan shall be due ten business days after award. The Plan shall be reviewed annually and updated as necessary.

7.3 Communications Plan

The Contractor shall provide a Communications Plan that provides the guidelines for communication between Contractor and EPA. The Communications Plan shall include, but not be limited to, escalation procedures, notification guidelines, communication channels, and risk management procedures. A draft Plan shall be delivered with the contractor's proposal submission and the final draft of the communications plan shall be due thirty calendar days after award. The contract shall review the Plan jointly with EPA annually and update as necessary.

7.4 Transition Support

7.4.1 Incoming Transition

In accordance with this task order, the Contractor shall provide a draft plan five business days after contract award for incoming transition. The Contractor shall coordinate with the Government in planning and implementing a complete transition to the Contractor's support model. The Contractor shall collaborate with the Government to develop and deliver an Incoming Transition Plan. The Government designates a transition period of six months for the incoming Contractor to coordinate and work with the incumbent Contractor. This transition plan shall include, but is not limited to:

- Availability of Key Resources.
- Timelines/Milestones.
- Coordination with Government representatives.
- Review, evaluation and transition of current support services.
- Transition of historic data to new Contractor system.
- Government-approved training and certification process.
- Transfer of hardware warranties and software licenses (if applicable).
- Transfer of all necessary business and/or technical documentation.
- Transfer of compiled and uncompiled source code, to include all versions, maintenance updates and patches (if applicable).
- Orientation phase and program to introduce Government personnel, programs, and users to the Contractor's team, tools, methodologies, and business processes.
- Distribution of Contractor purchased Government owned assets, including facilities, equipment, furniture, phone lines, computer equipment, etc.
- Transfer of Government Furnished Equipment (GFE) and Government Furnished Information (GFI).
- Documentation and Inventory.
- Applicable EPA briefing and personnel in-processing procedures.
- Comprehensive Security Plan.
- CBI and Chain of Custody Issues.

7.4.2 Outgoing Transition

In accordance with this task order, the Contractor shall provide a plan for 120 calendar days of outgoing transition for transitioning work from an active task order to a follow-on contract/order or Government entity. This transition may be to a Government entity, another Contractor or to the incumbent Contractor under a new contract/order. In accordance with the Government-approved plan, the Contractor shall assist the Government in planning and implementing a complete transition from this order to a successor provider. This shall include formal coordination with Government staff and successor staff and management. It shall also include delivery of copies of existing policies and procedures, and delivery of required metrics and statistics. This transition plan shall include, but is not limited to:

- Coordination with Government representatives.
- Review, evaluation and transition of current support services.
- Transition of historic data to new Contractor system.
- Government-approved training and certification process.
- Transfer of hardware warranties and software licenses (if applicable).
- Transfer of all necessary business and/or technical documentation.
- Transfer of compiled and uncompiled source code, to include all versions, maintenance updates and patches (if applicable).
- Orientation phase and program to introduce Government personnel, programs, and users to the Contractor's team, tools, methodologies, and business processes.
- Disposition of Contractor purchased Government owned assets, including facilities, equipment, furniture, phone lines, computer equipment, etc.
- Transfer of Government Furnished Equipment (GFE) and Government Furnished Information (GFI), and GFE inventory management assistance.
- Applicable EPA debriefing and personnel out-processing procedures.
- Turn-in of all government keys, ID/access cards, and security codes.

7.4.3 Documentation Analysis and Creation

The Contractor shall analyze documentation for existing dataflows and provide a gap analysis report. The report shall make recommendations for which dataflows require documentation to be created to ensure a successful transition. Once the gap analysis report is accepted by EPA, the contractor shall create documentation for the requested dataflows and include such documentation as system design documents.

7.5 Program Management Plan

The Contractor shall develop a Program Management Plan that requires Government approval. The Program Management Plan shall consist of control policies and procedures in accordance with standard industry practices for project administration, execution and tracking. The contractor shall review the Plan annually and update as necessary. The Program Management Plan shall be due five (5) calendar days after the award of the order and shall be updated when new development efforts are authorized.

The Program Management Plan shall include the following:

7.5.1 Identification of Milestones

The PMP shall detail when Government information, activity, equipment, material, facilities, etc. is required and timeline dependencies or prerequisites for subsequent Contractor activities.

7.5.2 Work Breakdown Structure (WBS)

The Contractor shall provide a WBS for development tasks over one hundred thousand dollars.

7.5.3 Video Conferencing

This will detail the capabilities that are compatible with EPA video conferencing services to ensure support of video media capabilities. The EPA currently utilizes Tandberg technology for video conferencing.

7.5.4 Risk Management Plan (RMP)

The Contractor shall supply a RMP that describes the Contractors management procedures for risk identification, tracking, and resolution.

7.5.5 Issue Escalation Plan

The Contractor shall outline procedures and policies regarding escalation of issues surrounding the management of the contract. This plan will encompass both Contractor and Government procedures.

7.6 Quality Control Plan

The Contractor shall provide a Quality Control Plan (QCP) that illustrates the methods it shall use to maintain quality, timeliness, responsiveness, customer satisfaction. The contractor's QCP shall define and identify, at a minimum, the following:

- **Roles and Responsibilities** – Outlines the roles and responsibilities for both EPA and the contractor needed to perform quality assessments.
- **Performance Strategy** – Provides the overall strategy for assessing quality, including measurement metrics & methods of surveillance
- **Reporting Mechanisms** – Outlines the reporting process used to track and report the overall quality of the program.
- **Performance Metrics** – Provides definition of the metrics for all work performed

A draft plan shall be delivered with the contractor's proposal submission and the final draft of the Quality Control Plan shall be due ten business days after award. The Plan shall be reviewed every six months and updated as necessary.

7.7 Key Personnel

The Contractor shall furnish Key Personnel for performance of tasks in accordance with task order clause H.23.

7.8 CDX Performance Metrics

Minimum performance metrics are outlined below. Contractor shall propose additional metrics in the QCP (Task 7.6). Any weights applied to these metrics shall be defined after the QCP has been approved and additional Contractor metrics have been incorporated. Surveillance documents are defined in the Quality Assurance Surveillance Plan. The Government may waive a Milestone Review under Tasks Three and Four if warranted by the short term or small dollar amount of a dataflow development effort.

	Performance Metric Name	TDD	Performance Metric Definition	Work Products	Service Levels	Primary Monitoring Methods	Financial Impact
1	Schedule Accuracy	All	This metric will evaluate the timeliness of the delivery of project management and technical material deliverables. Determined by the comparison of scheduled to actual delivery date based on business days.	All contractual deliverables outlined in the TDD response.	75% of deliverables submitted to EPA on the due date and accepted. If rejected, the resubmission date of the deliverable that is eventually accepted is what shall be recorded as the deliverable submission date for this metric.	Track deliverable due dates and actual deliverable submission dates in CDX Metrics Workbook section of the Task Order or dashboard developed by the contractor.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
2	Quality of Documentation Deliverables	All	This metric will measure the number of iterations required for deliverable final acceptance by EPA	All contractual deliverables and any additional deliverables outlined in the TDD response including System Requirement Specifications System Design Documents Design Readiness Review Materials Production Readiness Review Materials CROMERR Flow Checklist	90% of documents have no more than 1 iteration after initial deliverable submission to EPA for acceptance.	Track the deliverable iterations using the version numbers for each deliverable submission to EPA in the CDX Metrics Workbook or dashboard developed by the contractor.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
3	Quality of Software Test Deliverables	All	Government acceptance of final test results based on User Acceptance Testing Phase for the contractor developed code. Classification of issues is determined by both EPA and the contractor in joint review sessions.	Completed UAT Test Report	All critical or high issues are fixed within one business day of issue identification.	Review of UAT Test Report.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP

	Performance Metric Name	TDD	Performance Metric Definition	Work Products	Service Levels	Primary Monitoring Methods	Financial Impact
4	Quality of Software into Production		Government acceptance of software into CDX production environment and new issues do not arise because of new software	Software developed by the contractor	Minmal new issues (no more than 3) arise as a result of implementing new software developed by the contractor into the CDX production environment	Review of Production Issues for period following installation	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
5	TDD Cost Estimate Accuracy	All	This metric will measure the accuracy of the cost estimate in the contractor's TDD response. The EPA approved cost estimate shall be compared with the actual cost of the TDD.	TDD Response documents with initial cost estimate	Actual TDD costs are not more than 10% of the estimated costs. A documented innovative solution that wasn't originally in the contractor's TDD response, and that is acceptable to the government, shall require the contractor to send a revised TDD response with a revised cost estimate and technical approach.	Monthly Financial Reports Report containing TDD cost estimates vs. TDD cost actual.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
6	Shareholder Support	All	Shareholder satisfaction with contractor support provided	Random customer survey distributed to the CDX stakeholder managing each TDD Quality Deficiency Report	A random average survey score of 3 out of 5 for the TDD. Additionally zero Quality Deficiency Reports submitted for the TDD.	Survey results delivered to EPA and recorded in CDX Metrics Workbook or dashboard developed by the contractor	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP

	Performance Metric Name	TDD	Performance Metric Definition	Work Products	Service Levels	Primary Monitoring Methods	Financial Impact
7	Security Information Assurance	9.14	Applicable vulnerability alerts, bulletins and technical advisories implemented within 30 calendar days of issue date	Vulnerability alerts Bulletins Technical Advisories Weekly NCC Meetings and CCB meetings CSIRC Report as they come out	100% of Notices implemented by due date specified in the TDD	Contractor shall maintain a log of alerts, bulletins and technical advisories, the implementation/ action due dates, and the date the contractor completed implementation. The log results summarized in the CDX Metrics Workbook or dashboard developed by the contractor	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
8	Tier III Support	All	Length of time to respond to a CDX help desk ticket. A contractor's response includes the problem or issue, the probable cause of the problem/issue , a proposed resolution and approach for correction and a category of severity assigned (if applicable). **Critical issues** – Production environment only; issue that prohibits a user from meeting a reporting deadline and typically impacts multiple users. **High Issues** – Production or Test environment, but not development; issue may contain a workaround and issue affects one or small subset of users and is not critical for immediate reporting deadline.	N/A	90% of all Critical or High Production Issues have a probable cause , proposed resolution, and approach identified and communicated to EPA within 24 hours of issue identification. 90% of all High Non-Production Issues have a probable cause, proposed resolution, and approach identified and communicated to EPA by the end of the next business day of issue identification.	Individual Review of Tickets from the contractor's work request management system. Contractor records summary of results in CDX Metrics Workbook or dashboard developed by the contractor.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP

	Performance Metric Name	TDD	Performance Metric Definition	Work Products	Service Levels	Primary Monitoring Methods	Financial Impact
9	Product Monitoring	All	Product monitoring of software and hardware licenses including anti-virus scanning and Patchlink OS updates This metric will measure the contractor's ability to update products and registrations, including licenses before they expire and become unsupported by the corresponding software or hardware vendor.	CDX / IETB Asset and Purchase Tracking Spreadsheet Purchase Request (PR) Tracker	No (0%) products (software or hardware) go unsupported. The contractor shall submit a recommendation for an appropriate upgrade point/date at least 30 calendar days prior to license or product expiration. If the recommendation is submitted 29 days prior to expiration and the product ends up going unsupported, then the contractor did not meet this service level.	Un-supportability dates are identified and tracked by the contractor and summarized in the CDX Metrics Workbook or dashboard developed by the contractor	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP

References

Listed below are the Federal regulations, guidelines and procedures related to the requirements in this statement of work.

Reference Name	Reference Location
Federal Information (FIPS)	http://www.itl.nist.gov/fipspubs
NIST Special Publication	http://csrc.nist.gov/publications/PubsSPs.html
EPA Directive 2100, Information Resources Management Policy Manual	Provided by the contracting officer
EPA Information Security Manual	Provided by the contracting officer
OMB Circular A-130	http://www.whitehouse.gov/omb/circulars_a130_a130trans4
ANSI/EIA-748 "Earned Value Management System Guidelines."	http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI%2FEIA-748-B
EPA Security Escalation Procedures and Computer Security Incident Response Capability (CSIRC) procedures	Provided by the contracting officer
CDX O&M Guide	Provided by the contracting officer
CDX Contingency Plan	Provided by the contracting officer
CDX Separation of Duties Guide	Provided by the contracting officer
CDX Getting Started Guide	http://www.epa.gov/cdx/getstart/index.htm
CDX Application Management Portfolio	Provided by the contracting officer
CROMERR	http://www.epa.gov/CROMERR/
CDX Readiness Checklists	Provided by the contracting officer
CDX Configuration Management Plan	Provided by the contracting officer
CDX Service Level Agreement (SLA) Matrix Requirements	Provided by the contracting officer
Engineering Board Charter	Provided by the contracting officer
CDX Registration and Exchange Network Registration Procedures	http://cdx.epa.gov/FAQ.asp
EPA National Computing Center Application Deployment Checklist Procedures	Provided by the contracting officer
Exchange Network Functional Specification	http://exchangenetwork.net/index.htm

CDX Glossary

Central Data Exchange (CDX)
EPA's CDX is the point of entry to the National Environmental Information Exchange Network (Exchange Network) for environmental data exchanges to the Agency. CDX provides the capability for submitters to access their data through the use of Web Services. CDX enables EPA and participating Program Offices to work with stakeholders - including state, tribal and local governments and regulated industries - to enable streamlined, electronic submission of data via the Internet.

Communities of Interest
A community of interest is a group of Exchange Network stakeholders who share an interest in the exchange of a specific set of environmental data.

Construction
Construction is the erection, building, alteration, remodeling, improvement, or extension of buildings, structures or other property.
Construction also includes remedial actions in response to a release, or a threat of a release, of a hazardous substance into the environment as determined by the CERCLA of 1980.

Data Standard
A data standard depicts the required content and format in which particular types of data are to be presented and exchanged. Exchange Network partners must use data standards that have been approved by the Exchange Network Leadership Council (ENLC). The ENLC has subsumed the activities of the Environmental Data Standards Council (EDSC). A list of ENLC/EDSC-approved data standards is shown in Appendix C. Also see information at http://www.envdatastandards.net.

Data Element
A data element is the smallest unit of information stored in and exchanged among Exchange Network partners' information systems.
Examples of data elements are the facility name, DUNS number, and inspection date.

Data Exchange Template (DET)
A data exchange template is a standardized format that identifies the types of information required/allowed in a particular document or data exchange. Data exchange templates contain no data, but they define the format for exchange according to data standards and trading partner agreements. A standard template for DET's is available on the Exchange Network Website (http://www.exchangenetwork.net).

Demonstrated Node Configurations (DNCs)
Demonstrated Node Configurations are the messaging layer for Web Services that interacts with the Exchange Network. It is based on the Network WSDL which defines the Web Services.

Environmental Information Exchange Network (Exchange Network)
The Exchange Network is an Internet and standards-based information network among EPA and its partners in states, tribes, and territories. It is designed to help integrate information, provide secure real-time access to environmental information, and support the electronic collection and exchange of high-quality data and information. The Exchange Network provides a more efficient way of exchanging environmental information at all levels of government. It significantly improves the way EPA and its state, tribal, and territorial partners send and receive information.

Extensible Markup Language (XML)
Extensible Markup Language is a flexible language for creating common information formats and sharing both the format and content of data over the Internet and elsewhere. XML, a formatting language recommended by the World Wide Web Consortium (W3C). For guidance on the development of XML schema for the Exchange Network or related activities of the Network Technical Group, see the Exchange Network Web site at http://www.exchangenetwork.net.

Flow Configuration Documents (FCD's)
FCD's are the principle document that captures the detailed data exchange processing design and roles governing the data exchange using narrative text, diagrams and examples.
A standard template for FCD's is available on the Exchange Network Website http://www.exchangenetwork.net). For more information, refer to the Flow Configuration Checklist v1.1 at:
http://www.exchangenetwork.net/dev_schema/FlowDocChecklist_v1.1pdf.

Geographic Information Systems
Geographic Information Systems (GIS) include software and hardware systems that relate and display collected data in terms of geographic or spatial location. GIS allow users to collect, manage, and analyze large volumes of geospatial data and metadata. EPA and its partners use GIS systems to conduct complex environmental analyses.

Geospatial Data
Geospatial data are data that identify, depict, or describe the geographic locations, boundaries, or characteristics of the Earth's inhabitants or its natural or human-constructed features. Geospatial data include geographic coordinates (e.g., latitude and longitude) that identify a specific location on the Earth; data that are linked to geographic locations or have a geospatial component (e.g., socio-economic data, land use records and analyses, land surveys, homeland security information, and environmental analyses). Geospatial data may be obtained using a variety of approaches and technologies, including things such as surveys, satellite remote sensing, Global Position System (GPS) hand-held devices, and airborne imagery and detection devices.

Geospatial Technologies
Geospatial technologies include the computer hardware and software that are commonly used to collect, import, store, manipulate, analyze, and display digital geospatial data. These technologies include GIS, global positioning systems (GPS), remote sensing, and visualization systems.

Integrated Project Team
A group of individuals comprised of partner and EPA staff, support contractors and technology vendors organized to design and implement a specific exchange.

Metadata
Metadata are data or information that describes other data. Examples include data that describe how or where the data were collected, whether or not the data comply with agreed-upon data standards, or how the data will be used.

National System Flows
Ten National System Flows identified by the Exchange Network Leadership Council in the Exchange Network Strategic Plan (http://www.exchangenetwork.net). The flows are: Air Facility System (AFS); Air Quality System (AQS); Beach Notification; Facility ID; Integrated Compliance Information System – National Pollutant Discharge Elimination System (ICIS-NPDES); National Emissions Inventory (NEI); Resource Conservation and Recovery Act Information System (RCRAInfo); Safe Drinking Water Identification System (SDWIS); Toxics Release Inventory System (TRIS); and Water Quality Exchange.

ATTACHMENT 2

QUALITY ASSURANCE SURVEILLANCE PLAN (QASP)

U.S. EPA
Central Data Exchange (CDX) Support

Quality Assurance Surveillance Plan (QASP)

February 10, 2011

United States Environmental Protection Agency (EPA)
Office of Environmental Information (OEI)
Office of Information Collection (OIC)

1 Introduction

The EPA Quality Assurance Surveillance Plan (QASP) is designed to provide an effective surveillance and review method to monitor the Contractor's performance relative to the requirements listed in the Performance Work Statement (PWS). The QASP illustrates the systematic method the Government will use to evaluate the support provided by the Contractor. The desired outcome of QASP implementation and execution is improved partnership between the contractor and the EPA.

The contractor's internal quality control system will set forth the staffing and procedures for self inspecting the quality, timeliness, responsiveness, customer satisfaction, and other performance requirements in the PWS. The contractor will utilize its internal quality control system to assess and report its performance to the designated Government representatives, for the Government to validate or invalidate.

2 Roles and Responsibilities

2.1.1 Contracting Officer (CO)

The Contracting Officer verifies that the necessary actions for effective contract execution are carried out and oversees compliance with the terms of the task order. It is the Contracting Officer that assures the Contractor receives impartial, fair, and equitable treatment under the task order. The Contracting Officer is ultimately responsible for the final determination of the adequacy of the Contractor's performance, and will input the contractor's performance information into CPARS in accordance with section G clause Contractor Performance Information. Government surveillance may occur under the Inspection of Services clause for any service relating to the task order.

2.1.2 Task Order Contracting Officer's Representative (TOCOR)

The task order contracting officer (TOCOR) is responsible for technical administration of the project and assists the Contracting Officer with proper Government surveillance of the Contractor's performance. This is primarily done by working with the Technical Monitors to validate the contractor's reported performance metrics data.

2.1.3 Technical Monitors (TM)

Technical Monitors provide detailed technical oversight of the Contractor's performance and reports his or her findings to the TOCOR in a timely, complete and impartial fashion to support the TOCOR's technical administration activities. TMs are also responsible for submitting the

Quality Assurance Workbook and Quality Deficiency Reports (refer to Attachments 1 and 2) to the TOCOR.

3 Performance Metrics

EPA established the CDX performance metrics in order to support contractor performance management for this task order. The performance metrics are directly related to the success of the projects, products and services being supported by the contractor on this task order. The performance metrics listed in section 7.8 of the PWS are as follows:

- Schedule Accuracy
- Quality of Documentation Deliverables
- Quality of Software Test Deliverables
- Quality of Software into Production
- TDD Cost Estimate Accuracy
- Shareholder Support
- Security Information Assurance
- Tier III Support
- Product Monitoring

The EPA will order work under the task order though the issuance of Technical Direction Documents (TDDs). For Time and Materials TDDs, EPA will request from the contractor a work plan, cost estimate, a TDD QA Workbook, and any other required submissions. Each TDD will have performance metrics, service levels and weightings associated with them. The service level for each metric defines the acceptable contractor performance level for each performance metric. The performance metric weighting shall be on a TDD basis so that the results of contractor performance on each TDD are specific to the activities in each TDD. The combined sum total of all the performance metric's weights within a TDD shall total 100%.

The government will indicate desired weighting in its TDD requests so that the contractor factors the requested weighting into its TDD response, including technical approach and pricing. The contractor may recommend alternative performance metric weights in its response, but, the government will make the final determination with respect to performance metric weights. The approved performance metric weighting for a TDD may not be adjusted during the period of performance for the TDD, unless the government requests the contractor to submit a revised TDD response (price and technical).

4 Quality Control Plan (QCP)

The Contractor shall provide a Quality Control Plan (QCP) as part of its GSA Alliant Technical Plan that illustrates the methods it shall use to maintain quality, timeliness, responsiveness, customer satisfaction. The contractor's QCP shall define and identify, at a minimum, the following:

- **Roles and Responsibilities** – Outlines the roles and responsibilities for both EPA and the contractor needed to perform quality assessments.
- **Performance Strategy** – Provides the overall strategy for assessing quality, including measurement metrics & methods of surveillance
- **Reporting Mechanisms** – Outlines the reporting process used to track and report the overall quality of the program.
- **Performance Metrics** – Provides definition of the metrics for all work performed

A draft plan shall be delivered with the contractor's proposal submission and the final draft of the Quality Control Plan shall be due ten business days after award. The Plan shall be reviewed every six months and updated as necessary.

4.1.1 Quarterly Performance Reviews

The Contractor shall participate with EPA in Quarterly Performance Review meetings. The purpose of the quarterly meeting is to;

- Review the contractor's quarterly performance metrics data. Review the projected financial impact of the contractor's quarterly performance;
- Review the impact that the contractor's quarterly performance had on CDX Program stakeholders;
- Discuss any proposed changes to any TDD's performance metrics, service levels or metrics' weights;
- Discuss any Quality Discrepancy Reports (QDRs) submitted during the quarter and status of related corrective action plans

The contractor shall provide a quarterly self- assessment report deliverable in order to assist with the Quarterly Performance Review meetings 5 calendar days prior to the Quarterly Performance Review, unless otherwise agreed upon by both parties.

4.1.2 Evaluation of Performance Metrics

For time and materials TDDs, the Contractor is expected to consistently perform at no less than the minimum acceptable service levels indicated in the CDX Performance Metrics. The performance evaluation will be evaluated by the TOCOR and approved by the contracting officer. A complete example of the CDX Quality Assurance Workbook is provided at Attachment 1 – CDX QA Workbook. After receiving the contracting officer's evaluation of the contractor's performance for each quarter, for any service levels not met, the contractor shall provide a mitigation position to request reconsideration, provide a corrective action plan for unsatisfactory performance, or a combination of these, in consultation with the Contracting Officer. For Firm Fixed Priced TDDs, the CDX QA Workbook is not applicable.

4.1.3 QCP Implementation after Award

The contractor's proposed Quality Control Plan shall take effect within 30 calendar days after task order award. Therefore, the first quarterly performance review meeting shall occur approximately 122 calendar days after task order award. All contractor work on the task order shall be subject to the Quality Assurance Surveillance Plan as well as the contractor's quality control plan. As TDDs are issued and projects are initiated during the administration of the task order, each TDD shall immediately be subject to this Quality Assurance Surveillance Plan, as well as the contractor's quality control plan.

5 Methods of Surveillance

The EPA will conduct inspections of the contractor's operations. The contractor's operations will be monitored by some or all of the following methods: conducting site visits, viewing and analyzing reports, reviewing and analyzing quality of products and services, reviewing quality of documentation, reviewing feedback from CDX Program stakeholders, and examining Quality Deficiency Reports (QDR). Any of the following methods can be used for evaluation:

- Site Visits
- Ad-Hoc Inspection
- Review of Documentation
- Interviews and Other Feedback

5.1 Surveillance Mode

In addition to day-to-day activities and formal reviews, the EPA or their representatives may use the following surveillance methods.

5.1.1 Review of Documentation

The Contractor shall develop and maintain all deliverables and related documentation as required in the statement of work and TDDs. The Contractor shall also develop and maintain documentation that demonstrates the results of its own inspections as prescribed in its QCP.

The Contracting Officer or their representative may review both forms of documentation for the purpose of validating performance metrics data. When reviewing the Contractor's documentation, the Government may review 100% of the deliverables (including documentation) or a representative sample. Documentation may be reviewed during a site visit or at intervals throughout the period of performance.

5.1.2 Site Visits

Site visits are used to observe actual performance and to conduct interviews to determine the extent of compliance with the quality metrics, and to ensure any noted defects are effectively addressed and corrected as quickly as possible. Routine reviews may involve direct observation of contractor personnel performing tasks, interacting with government staff or the public, and/or reviewing documentation that demonstrates compliance with standards. On-site inspections may be performed by the EPA or their representatives of EPA. Inspections may be either planned in advance or conducted ad-hoc.

5.1.3 Ad-Hoc

These inspections are unscheduled and will be conducted as a result of special interests arising from routine monitoring of the Contractor's QCP, an unusual occurrence pertaining to the agreement, a negative Quality Deficiency Report, or other EPA concerns. These inspections may also be used as a follow-up to a previous inspection. Inspection findings will be provided to contractor personnel as appropriate.

When visiting a site, either the CO or their representative or a designated third party may conduct their own inspections of Contractor performance activities, or accompany the Contractor's designated Quality Control Inspector (QCI) on scheduled inspections. The CO or their representative may also immediately inspect the same area as soon as the QCI has completed the quality control inspection to determine if any surveillance areas were overlooked. The CO or their representative may also inspect an area prior to the QCI and compare results.
The CO or their representative records all findings; defects noted are provided in writing and the contractor shall correct defects.

5.1.4 Interviews and Other Feedback

The contracting officer or their representative may interview members of the Contractor's staff and Government personnel in order to ascertain current practices and compliance with the PWS and QCP for consideration when completing its evaluation. The contractor shall make their staff available for those interviews.

5.2 Quality Deficiency Report (QDR)

The Government may document instances of deficient or at-risk performance using the Quality Deficiency Report (QDR) Form (Attachment 2). To the extent practicable, the contractor shall resolve issues informally, with the CO or their representative and Contractor working together.

When a QDR is required to document performance issues, EPA will submit a QDR to the contractor with a required response date. Upon receipt of a QDR, the Contractor shall assess the situation and respond by submitting a corrective action plan that leads toward correction of the deficiency. After the CO or their representative reviews the Contractor's corrective action plan, EPA will either accept the corrective action plan or reject the plan for revision and provide an explanation. If the initial corrective action plan is rejected by EPA, the contractor shall submit a revised correction action plan within 48 hours.

6 Attachments

Attachment 1	CDX QA Workbook Example
Attachment 2	Quality Deficiency Report (QDR) Form

Attachment 1: Sample of the CDX QA Workbook

EVALUATION OF CONTRACTOR PERFORMANCE ON A SINGLE TIME & MATERIALS TDD

PERFORMANCE METRICS

Metric Name	Weight	Service Level	Quarterly Performance Data	Service Level Met?	Corrective Action?
Schedule Accuracy	15%	75%	75%	Y	N
Quality of Documentation on Deliverables	15%	90%	90%	Y	N
Quality of Software Test Deliverables	5%	100%	100%	Y	N
Quality of Software Into Production	25%	0%	0%	Y	N
TDD Cost Estimate Accuracy	10%	10%	10%	Y	N
Shareholder Support	5%	80%	80%	Y	N
Security Information Assurance	10%	100%	90%	N	Y
Tier III Support	5%	90%	90%	Y	N
Product Monitoring	10%	0%	0%	Y	N

Attachment 2 – Quality Deficiency Report Form

QUALITY DEFICIENCY REPORT	1. CONTRACT NUMBER
Report Number:	Date:

2. TO: (Contractor and Manager Name)	3. FROM: (Name of CO or their representative)

DATES

CONTRACTOR NOTIFICATION	CONTRACTOR RESPONSE DUE BY	RETURNED BY CONTRACTOR	ACTION COMPLETE

4. DISCREPANCY OR PROBLEM *(Describe in Detail: Include reference in PWS Directive: Attach continuation sheet if necessary.)*

5. SIGNATURE OF CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (CO or their representative)

6. TO: (*CO or their representative*)	7. FROM: (*Contractor*)

8. CONTRACTOR RESPONSE AS TO CAUSE, CORRECTIVE ACTION AND ACTIONS TO PREVENT RECURRENCE. ATTACH CONTINUATION SHEET IF NECESSARY. (*Cite applicable Q.A. program procedures or new A.W. procedures.*)

9. SIGNATURE OF CONTRACTOR REPRESENTATIVE	10. DATE

11. GOVERNMENT EVALUATION OF CONTRACTOR RESPONSE/RESOLUTION PLAN: (*Acceptable response plan, partial acceptance of response plan, rejection: attach continuation sheet if necessary*)

12. GOVERNMENT ACTIONS (*Payment withholding, cure notice, show cause, other.*)

CLOSE OUT

	NAME AND TITLE	SIGNATURE	DATE
CONTRACTOR NOTIFIED			
CO or their representative			
CONTRACTING OFFICER			

ATTACHMENT 3

GOVERNMENT FURNISHED PROPERTY

Property Purchased for CDX Contract between Contract Inception through September 30, 2009					
PAR Number	CGI Asset Number	Official Name	Manufacturer	Model	Serial Number
001	CDX-000125	Server	Dell	Power Edge R710	BTLYJK1
001	CDX-000126	Server	Dell	Power Edge R710	9TLYJK1
001	CDX-000131	Firewall	Nokia	IP390	93093000094
001	CDX-000132	Load Balancer	Cisco	ACE-4710	QCF1325004H
001	CDX-000133	Switch	Cisco	3560G-48TS	FOC1325Y3AU
001	CDX-000126	Tape	IBM	TS3200	D1555
003	N/A	PCI-E Card	Qlogic	2462	2CLLQJ1
004	N/A	Tape Cartridges	Imation	LTO4	

Property Purchased for CDX Contract between October 1, 2009 through September 30, 2010					
PAR Number	CGI Asset Number	Official Name	Manufacturer	Model	Serial Number
043	N/A	Servers	Dell	Power Edge R710	CM0R3M1, DM0R3M1, FM0R3M1, BM0R3M1
044	N/A	Switch	Cisco	6509	SMC1330002X
047	N/A	Load Balancer	Big IP	Traffic Manager 1600	f5-djlu-kpbn
066	CDX-000134	Load Balancer	Big IP	Traffic Manager 1600	f5-izcp-rhrx

Location Details	Value
Jefferson: Row 1, Rack 1	$ 10,484.05
Jefferson: Row 1, Rack 1	$ 10,484.05
Jefferson: Row 1, Rack 1	$ 4,296.15
Jefferson: Row 1, Rack 1	$ 10,990.40
Jefferson: Row 1, Rack 1	$ 5,493.48
Jefferson: Row 1, Rack 1	$ 16,465.00
Jefferson: Row 1, Rack 1	$ 1,371.91
Jefferson Room	$ 2,740.80
	$ 62,325.84

Location Details	Value
NCC, RTP, NC	$ 59,710.92
NCC, RTP, NC	$ 91,881.06
NCC, RTP, NC	$ 25,382.16
Jefferson Room	$ 16,666.50
	$ 193,640.64

ATTACHMENT 4

ALIANT LABOR CATEGORY DESCRIPTIONS

Section J
ATTACHMENT 4
LABOR CATEGORY DESCRIPTIONS

Knowledge/Skill Levels:

Many functional labor categories below **(marked with "#")** are further subdivided by knowledge/skill level. Definitions of these knowledge/skill levels are shown in this chart:

Level	**Knowledge/Skill Description**
Entry-Level	Applies fundamental concepts, processes, practices, and procedures on technical assignments. Performs work that requires practical experience and training. Work is performed under supervision.
Journeyman	Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable.
Senior	Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others.
Master	Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has domain and expert technical knowledge. Directs and controls activities for a client, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others.

The "G" in the labor identification (ID) numbers below indicate Government-Site Work (see Section J, Attachment 2). The "C" in the labor ID numbers below indicate Contractor-Site Work (see Section J, Attachment 3).

Administration/Clerical **(101G# and 101C#)**

(a) Responsible for developing, drafting, writing and editing reports, briefs, proposals, and other documents in support of a client's requirements.

(b) Interfaces with personnel to coordinate meetings, maintain logs, records and files, provides end-user support, and performs general administrative duties.
(c) Assists in budgetary, billing, and financial management.
(d) Responsible for preparing and/or maintaining systems, programming and operations documentation, procedures and methods, including user reference manuals.

Applications Developer **(102G# and 102C#)**

(a) Designs, develops, enhances, debugs, and implements software. Troubleshoots production problems related to software applications.
(b) Researches, tests, builds, and coordinates the conversion and/or integration of new products based on client requirements. Designs and develops new software products or major enhancements to existing software.
(c) Addresses problems of systems integration, compatibility, and multiple platforms.
(d) Consults with project teams and end users to identify application requirements.
(e) Performs feasibility analysis on potential future projects to management.
(f) Assists in the evaluation and recommendation of application software packages, application integration and testing tools.
(g) Resolves problems with software and responds to suggestions for improvements and enhancements.
(h) Acts as team leader on projects.
(i) Instructs, assigns, directs, and checks the work of other software developers on development team.
(j) Participates in development of software user manuals.

Applications Systems Analyst **(103G# and 103C#)**

(a) Formulates/defines system scope and objectives.
(b) Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results.
(c) Prepares detailed specifications for programs. Assists in the design, development, testing, implementation, and documentation of new software and enhancements of existing applications.
(d) Works with project managers, developers, and end users to ensure application designs meet business requirements.
(e) Formulates/defines specifications for complex operating software programming applications or modifies/maintains complex existing applications using engineering releases and utilities from the manufacturer.
(f) Designs, codes, tests, debugs, and documents those programs.
(g) Provides overall operating system, such as sophisticated file maintenance routines, large telecommunications networks, computer accounting, and advanced mathematical/scientific software packages.
(h) Assists all phases of software systems programming applications.
(i) Evaluates new and existing software products.

Business Process Consultant **(104G and 104C)**

(a) Analyzes process and re-engineering, with an understanding of technical problems and solutions as they relate to the current and future business environment.
(b) Creates process change by integrating new processes with existing ones and communicating these changes to impacted Business Systems teams.
(c) Recommends and facilitates quality improvement efforts.

Business Systems Analyst **(105G and 105C)**

(a) Formulates and defines systems scope and objectives based on both user needs and a thorough understanding of business systems and industry requirements.
(b) Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operation time, and form of desired results. Includes analysis of business and user needs, documentation of requirements, and translation into proper system requirements specifications.
(c) Provides consultation on complex projects and is considered to be the top level contributor/specialist of most phases of systems analysis, while considering the business implications of the application of technology to the current and future business environment.

Chief Information Security Officer **(106G and 106C)**

(a) Responsible for determining enterprise information security standards. Develops and implements information security standards and procedures.
(b) Provides tactical information security advice and examining the ramifications of new technologies.
(c) Ensures that all information systems are functional and secure.

Computer Scientist **(107G and 107C)**

(a) Acts as a senior consultant in complex or mission critical client requirements.
(b) Develops, modifies, and applies computer modeling and programming applications to analyze and solve mathematical and scientific problems affecting system and program performance.
(c) Participates in all phases of scientific and engineering projects such as research, design, development, testing, modeling, simulating, training, and documentation.

Computer Forensic & Intrusion Analyst **(108G and 108C)**

(a) Provides knowledge in computer and network forensics.
(b) Conducts vulnerability assessments/penetration tests of information systems.
(c) Develops, researches and maintains proficiency in tools, techniques, countermeasures, and trend in computer and network vulnerabilities, data hiding, and encryption.

(d) Identifies, deters, monitors, and investigates computer and network intrusions.
(e) Provides computer forensic support to high technology investigations in the form of evidence seizure, computer forensic analysis, and data recovery.

Configuration Management Specialist (109G# and 109C#)

(a) Provides configuration management planning.
(b) Describes provisions for configuration identification, change control, configuration status accounting, and configuration audits.
(c) Regulates the change process so that only approved and validated changes are incorporated into product documents and related software.

Data Architect (110G AND 110C)

(a) Designs and builds relational databases. Performs data access analysis design, and archive/recovery design and implementation.
(b) Develops strategies for data acquisitions, archive recovery, and implementation of a database.
(c) Works in a data warehouse environment, which includes data design, database architecture, and metadata repository creation.
(d) Translates business needs into long-term architecture solutions.
(e) Defines, designs, and builds dimensional databases.
(f) Develops data warehousing blueprints, evaluating hardware and software platforms, and integrating systems.
(g) Reviews and develops object and data models and the metadata repository to structure the data for better management and quicker access.

Data Warehousing Specialist (111G# and 111C#)

(a) Coordinates the data administration technical function for both data warehouse development and maintenance.
(b) Facilitates change control, problem management, and communication among data architects, programmers, analysts, and engineers.
(c) Establishes and enforces processes to ensure a consistent, well managed, and well-integrated data warehouse infrastructure.
(d) Analyzes and identifies data and metadata requirements.
(e) Defines user requirements and database design specifications.
(f) Designs, implements, and supports data warehousing requirements. Implements business rules via stored procedures, middleware, or other technologies.
(g) Provides product support and maintenance of the data warehouse.
(h) Performs data warehouse design and construction.
(i) Prepares/implements data verification and testing methods for the data warehouse.

Database Specialist **(112G# and 112C#)**

(a) Provides all activities related to the administration of computerized databases.
(b) Projects long-range requirements for database administration and design in conjunction with other managers in the information systems function.
(c) Designs, creates, and maintains databases in a client/server environment.
(d) Conducts quality control and auditing of databases in a client/server environment to ensure accurate and appropriate use of data.
(e) Advises users on access to various client/server databases.
(f) Designs, implements, and maintains complex databases with respect to JCL, access methods, access time, device allocation, validation checks, organization, protection and security, documentation, and statistical methods.
(g) Applies knowledge and experience with database technologies, development methodologies, and front-end (e.g., COGNOS)/back-end programming languages (e.g., SQL). Performs database programming and supports systems design.
(h) Includes maintenance of database dictionaries, overall monitoring of standards and procedures, file design and storage, and integration of systems through database design.

Disaster Recovery Specialist **(113G# and 113C#)**

(a) Designs and administers programs to include policies, standards, guidelines, training programs, and a viable quality assurance process for disaster recovery.
(b) Oversees and reviews the testing and implementation of software, data systems, and data networks to ensure that the integrity and security of all electronic data and data systems are adequately protected.
(c) Facilitates the preparation of an organization-wide business resumption plan.
(d) Assists in the coordination and establishment of disaster recovery programs and business resumption planning across mainframe and client server platforms.
(e) Coordinates and monitors simulation testing across all platforms.
(f) Designs and administers programs to include policies, standards, guidelines, training programs, and a viable quality assurance process for disaster recovery.

Enterprise Architect **(114G and 114C)**

(a) Provides high-level architectural expertise to managers and technical staff.
(b) Develops architectural products and deliverables for the enterprise and operational business lines.
(c) Develops strategy of system and the design infrastructure necessary to support that strategy.
(d) Advises on selection of technological purchases with regards to processing, data storage, data access, and applications development. Sets standards for the client/server relational database structure for the organization (SQL, ORACLE, SYBASE, etc.).
(e) Advises of feasibility of potential future projects to management.

Enterprise Resource Planning (ERP) Analyst (115G and 115C)

(a) Assists with the development and maintenance of the Enterprise Resource Planning (ERP) program.
(b) Analyzes and evaluates ERP application systems. Assists in software upgrades, documentation, and implementation.
(c) Customizes and configures workflow to allow the integration of client/server applications.
(d) Tests ERP layout to ensure the system is meeting corporate needs.

ERP Business/Architectural Specialist (116G and 116C)

(a) Adapts functional business requirements and processes to technical solutions based upon comprehensive enterprise application solution sets.
(b) Enterprise resource planning and management processes, including but not limited to: knowledge management, investment analysis, data warehousing, e-commerce, return on investment analysis, human resource analysis, material management and logistics, supply chain management, procurement, ordering, manufacturing, decision support, and information dissemination.

Financial Analyst (117G and 117C)

(a) Provides support in the areas of budget, billing, reporting, and financial management for IT initiatives.

Geographic Information System (GIS) Analyst/Programmer (118G and 118C)

(a) Demonstrates proficiency in GIS analysis and data modeling.
(b) Demonstrates and maintains proficiency with current and developing technologies and software related to geographic analysis.
(c) Coordinates, manages, administers, and develops the Geographic Information Systems.
(d) Develops various types of GIS maps and related data sets.
(e) Designs and implements GIS analytical procedures.
(f) Performs analysis and maintenance of GIS systems.

Graphics Specialist (119G and 119C)

(a) Produces graphic art and visual materials for promotions, advertisements, films, presentations, packaging, and informative and instructional material through a variety of media outlets such as websites and CD-ROMs.
(b) Generates, manipulates, and integrates graphic images, animations, sound, text and video generated with automated tools into consolidated and seamless multimedia programs.

Groupware Specialist **(120G and 120C)**

(a) Provides the implementation, maintenance, and support of company messaging system.
(b) Provides technical support on local groupware replication and client dial-up access issues.

Hardware Engineer **(121G# and 121C#)**

(a) Provides analysis related to the design, development, and implementation of hardware for products.
(b) Develops test strategies, devices, and systems.
(c) Performs stress and performance tests on a variety of computer hardware including circuit boards, processors and wiring.

Help Desk Specialist **(122G# and 122C#)**

(a) Responds to and diagnoses problems through discussion with users.
(b) Ensures a timely process through which problems are controlled. Includes problem recognition, research, isolation, resolution, and follow-up steps.
(c) Supervises operation of help desk and serves as focal point for customer concerns.
(d) Provides support to end users on a variety of issues.
(e) Identifies, researches, and resolves technical problems.
(f) Responds to telephone calls, email and personnel requests for technical support.
(g) Documents, tracks, and monitors the problem to ensure a timely resolution.
(h) Provides second-tier support to end users for either PC, server, or mainframe applications or hardware.
(i) Interact with network services, software systems engineering, and/or applications development to restore service and/or identify and correct core problem.
(j) Simulates or recreates user problems to resolve operating difficulties.
(k) Recommends systems modifications to reduce user problems.

Information Assurance/Security Specialist **(123G# and 123C#)**

(a) Determines enterprise information assurance and security standards.
(b) Develops and implements information assurance/security standards and procedures.
(c) Coordinates, develops, and evaluates security programs for an organization. Recommends information assurance/security solutions to support customers' requirements.
(d) Identifies, reports, and resolves security violations.
(e) Establishes and satisfies information assurance and security requirements based upon the analysis of user, policy, regulatory, and resource demands.
(f) Supports customers at the highest levels in the development and implementation of doctrine and policies.

(g) Applies know-how to government and commercial common user systems, as well as to dedicated special purpose systems requiring specialized security features and procedures.
(h) Performs analysis, design, and development of security features for system architectures.
(i) Analyzes and defines security requirements for computer systems which may include mainframes, workstations, and personal computers.
(j) Designs, develops, engineers, and implements solutions that meet security requirements.
(k) Provides integration and implementation of the computer system security solution.
(l) Analyzes general information assurance-related technical problems and provides basic engineering and technical support in solving these problems.
(m) Performs vulnerability/risk analyses of computer systems and applications during all phases of the system development life cycle.
(n) Ensures that all information systems are functional and secure.

Information Specialist/Knowledge Engineer (124G and 124C)
Develops information retrieval solutions to support client requirements for specified domain subjects, using information retrieval software languages and automated text analysis and extraction techniques

Modeling and Simulation Specialist (125G and 125C)

(a) Specialist in modeling and simulation functions or operations such as, but not limited to exercises, plans, coordination, demonstrations, and instruction in the fields such as, but not limited to health, environmental, transportation, law enforcement, and security for military, and civil agencies.
(b) Supports live, constructive, or virtual training.

Network Specialist (126G# and 126C#)

(a) Provides technical guidance for directing and monitoring information systems operations. Designs, builds, and implements network systems.
(b) Directs compilation of records and reports concerning network operations and maintenance. Troubleshoots network performance issues. Analyzes network traffic and provides capacity planning solutions.
(c) Monitors and responds to complex technical control facility hardware and software problems. Interfaces with vendor support service groups to ensure proper escalation during outages or periods of degraded system performance.
(d) Manages the purchase, testing, installation, and support of network communications, including LAN/MAN/WAN systems.
(e) Performs system-level design and configuration of products including determination of hardware, OS, and other platform specifications.
(f) Plans large-scale systems projects through vendor comparison and cost studies.

(g) Performs a variety of systems engineering tasks and activities that are broad in nature and are concerned with major systems design, integration, and implementation, including personnel, hardware, software, budgetary, and support facilities and/or equipment.
(h) Provides quality assurance review and the evaluation of new and existing software products.
(i) Provides assistance and oversight for all information systems operations activities, including computer and telecommunications/communications operations, data entry, data control, LAN/MAN/WAN administration and operations support, operating systems programming, system security policy procedures, and/or web strategy and operations.
(j) Provides input to policy level discussions regarding standards and budget constraints.
(k) Supervises all personnel engaged in the operation and support of network facilities, including all communications equipment on various platforms in large scale or multi-shift operations.
(l) Supervises complex operations that involve two or more additional functions such as, but not limited to, network operations, systems security, systems software support, and production support activities.
(m) Monitors and responds to hardware, software, and network problems.
(n) Provides the routine testing and analysis of all elements of the network facilities (including power, software, communications machinery, lines, modems, and terminals).
(o) Utilizes software and hardware tools and identifies and diagnoses complex problems and factors affecting network performance.
(p) Troubleshoots network systems when necessary and makes improvements to the network

Program Manager **(127G and 127C)**

(a) Organizes, directs, and manages contract operation support functions, involving multiple, complex and inter-related project tasks.
(b) Manages teams of contract support personnel at multiple locations.
(c) Maintains and manages the client interface at the senior levels of the client organization.
(d) Meets with customer and contractor personnel to formulate and review task plans and deliverable items. Ensures conformance with program task schedules and costs.

Project Manager **(128G and 128C)**

(a) Leads team on large projects or significant segment of large complex projects.
(b) Analyzes new and complex project related problems and creates innovative solutions involving finance, scheduling, technology, methodology, tools, and solution components.

(c) Provides applications systems analysis and programming activities for a Government site, facility or multiple locations.
(d) Prepares long and short-range plans for application selection, systems development, systems maintenance, and production activities and for necessary support resources.
(e) Oversees all aspects of projects.

Quality Assurance Specialist **(129G# and 129C#)**

(a) Provides development of project Software Quality Assurance Plan and the implementation of procedures that conforms to the requirements of the contract.
(b) Provides an independent assessment of how the project's software development process is being implemented relative to the defined process and recommends methods to optimize the organization's process.
(c) May be responsible for all activities involving quality assurance and compliance with applicable regulatory requirements.
(d) Conducts audits and reviews/analyzes data and documentation.
(e) Develops and implements procedures and test plans for assuring quality in a system development environment which supports large databases and applications.

Research Analyst **(130G and 130C)**

(a) Plans, organizes, and conducts research in a variety of areas, such as new or existing products, science, social science, law or business, etc. in support of an IT initiative.
(b) Searches sources such as reference works, literature, documents, newspapers, statistical records, and other sources of information. May use Internet, Intranet, magazines, periodicals, journals, and other media to perform research.
(c) Analyzes information and statistical data to prepare reports and studies for use by professionals.

Strategic/Capital Planner **(131G and 131C)**

(a) Provides strategic planning of large projects or a significant segment of a strategic planning portion of a large complex project.
(b) Provides the overall approach to clarify mission statements so they can be used as springboards in envisioning their desired future.
(c) Assists in developing mission and vision statements, subsequent goal delineation, provides guidance for building operational plans and specifying measurable outcomes to include capital outlay planning efforts in a consolidated strategic planning process and prioritizes those initiatives.
(d) Assist in preparation of key strategic planning documentation, including OMB Form 300.

Subject Matter Expert **(132G# and 132C#)**

(a) Serves as subject matter expert, possessing in-depth knowledge of a particular area, such as business, computer science, engineering, mathematics, or the various sciences.
(b) Provides technical knowledge and analysis of highly specialized applications and operational environments, high-level functional systems analysis, design, integration, documentation and implementation advice on exceptionally complex problems that need extensive knowledge of the subject matter for effective implementation.
(c) Participates as needed in all phases of software development with emphasis on the planning, analysis, testing, integration, documentation, and presentation phases.
(d) Applies principles, methods and knowledge of the functional area of capability to specific task order requirements, advanced mathematical principles and methods to exceptionally difficult and narrowly defined technical problems in engineering and other scientific applications to arrive at automated solutions.

Systems Engineer **(133G and 133C)**

(a) Provides analysis related to the design, development, and integration of hardware, software, man-machine interfaces and all system level requirements to provide an integrated IT solution.
(b) Develops integrated system test requirement, strategies, devices and systems.
(c) Directs overall system level testing.

Technical Editor **(134G and 134C)**

(a) Reviews content of technical documentation for quality.
(b) Produces technical and scientific illustrations for presentations and/or publication, as appropriate to the requirements.
(c) Ensures that documents follow the style laid out in the company's style guide.

Technical Writer **(135G and 135C)**

(a) Writes a variety of technical articles, reports, brochures, and/or manuals for documentation for a wide range of uses.
(b) Coordinates the display of graphics and the production of the document.
(c) Ensures content is of high quality and conforms with standards.

Test Engineer **(136G# and 136C#)**

(a) Evaluates, recommends, and implements automated test tools and strategies.
(b) Designs, implements, and conducts test and evaluation procedures to ensure system requirements are met.

(c) Develops, maintains, and upgrades automated test scripts and architectures for application products. Also writes, implements, and reports status for system test cases for testing. Analyzes test cases and provides regular progress reports.
(d) Serves as subject matter specialist providing testing know-how for the support of user requirements of complex to highly complex software/hardware applications.
(e) Directs and/or participates in all phases of risk management assessments and software/hardware development with emphasis on analysis of user requirements, test design and test tools selection.

Training Specialist **(137G# and 137C#)**

(a) Assesses, designs, and conceptualizes training scenarios, approaches, objectives, plans, tools, aids, curriculums, and other state of the art technologies related to training and behavioral studies.
(b) Identifies the best approach training requirements to include, but not limited to hardware, software, simulations, course assessment and refreshment, assessment centers, oral examinations, interviews, computer assisted and adaptive testing, behavior-based assessment and performance, and team and unit assessment and measurement.
(c) Develops and revises training courses. Prepares training catalogs and course materials.
(d) Trains personnel by conducting formal classroom courses, workshops, and seminars.

Voice/Data Communications Engineer **(138G# and 138C#)**

(a) Provides technical direction and engineering knowledge for communications activities including planning, designing, developing, testing, installing and maintaining large communications networks.
(b) Ensures that adequate and appropriate planning is provided to direct building architects and planners in building communications spaces and media pathways meet industry standards.
(c) Develops, operates, and maintains voice, wireless, video, and data communications systems.
(d) Provides complex engineering or analytical tasks and activities associated with one or more technical areas within the communications function.

Web Content Analyst **(139G and 139C)**

(a) Provides for development and content that will motivate and entertain users so that they regularly access the website and utilize it as a major source for information and decision-making.
(b) Provides managing/performing website editorial activities including gathering and researching information that enhances the value of the site.

Web Designer **(140G and 140C)**

(a) Designs and builds web pages using a variety of graphics software applications, techniques, and tools.

(b) Designs and develops user interface features, site animation, and special-effects elements. Contributes to the design group's efforts to enhance the look and feel of the organization's online offerings.

(c) Designs the website to support the organization's strategies and goals relative to external communications.

(END OF SECTION J, ATTACHMENT 4)

ATTACHMENT 5

AGENCY VERIFICATION PROCEDURES**

ATTACHMENT 10

AGENCY VERIFICATION PROCEDURES

Agency Personal Verification Procedures for Contractor Personnel
October 2006

Background: Homeland Security Presidential Directive 12 (HSPD-12), signed on August 27, 2004, requires a Government-wide, common identification standard for all Federal and contractor employees requiring physical access to Federally controlled facilities and/or logical access to Federally controlled information systems. The goals of HSPD-12 are to enhance safety and security, increase Government efficiency, reduce identity fraud, and protect personal privacy.

HSPD-12 requires that the common identification be: (a) issued based on sound criteria for verifying an individual employee's identity; (b) strongly resistant to identity fraud, tampering, counterfeiting, and terrorist exploitation; (c) rapidly authenticated electronically; and (d) issued by providers whose reliability has been established by an official accreditation process.

HSPD-12 and its common identification standard require personal identity verification (PIV), background investigations, and suitability determinations for all affected contractor and subcontractor personnel. In accordance with FAR clause 52.204-9, Personal Identity Verification of Contractor Personnel, contractors and subcontractors must comply with EPA's master plan for implementing HSPD-12.

a) Contractor Requirements for Personal Identity Verification of Contractor Personnel (including subcontractors)

Contractor Employees Requiring Access to EPA facilities or EPA Information Systems for at Least 24 Hours a Week for at Least 6 Months: All individual contractor employees whose work under the contract requires on-site access to an EPA controlled facility or logical access to an EPA information system for at least 24 hours a week for at least 6 months a year, will be required to undergo a background investigation in order to receive an EPA Personnel Access and Security System (EPASS) badge.

To begin the PIV process, the contractor should submit to the Contracting Officer Representative (COR) within ten (10) days of contract award or contract modification with this Attachment to Work Statement "Agency Personal Verification Procedures for Contractor Personnel," the following information in electronic format via secure means using the HSPD-12 Contractor Template found at http://epa.gov/oam/. The template was developed to assist in the transmission of the required contractor employee information in a uniform format. The template also contains drop down menus when entering data in various data cells. Specifically, the 8 data elements, Employee Type, Program Office, Work City and State, Birth State, Birth Country, Citizenship, Previous Investigation and Investigative Agency, contain drop down menus.

- Contract number;

- Contract expiration date;

- Name, address, and phone number of the Contractor Program Manager point of contact;

- Name, date of birth, place of birth (city, state, country), and Social Security Number for all contractor employees identified above. (NOTE: This information must be protected at all times, including during transmission, according to the requirements of the Privacy Act of 1974; see http://www.epa.gov/privacy/);

- Employee Type, Position, Email address, Program Office, Work City and State,

- An indication of which contractor employees are foreign nationals;

- Name of each contractor employee claiming to have a previous, favorably adjudicated Federal background investigation on record, and the name of the Federal Agency that required the investigation, and the completion date.

The contract-level COR will upload this information to the Office of Administrative Services Information System (OASIS) personnel security database.

After submission of the preliminary information, the contractor will be notified by the contract-level COR or PSB when to begin providing all information on Standard Form (SF) 85P, Questionnaire for Public Trust Positions, and submit the form electronically to PSB via the Office of Personnel Management's (OPM's) Electronic Questionnaires for Investigations Processing (e-QIP) system. Instructions for using e-QIP, filling out, and submitting the SF 85P on-line, can be found at http://www.opm.gov/e-qip/reference.asp. As part of the investigative and EPASS badging processes, contractor employees must be fingerprinted, photographed and provide two forms of identification, at a time and location specified by the COR. These fingerprints will be sent to the Federal Bureau of Investigation (FBI) for processing.

Contractor employees with a favorably adjudicated Federal background investigation at the National Agency Check and Inquiries (NACI) level or above, completed within the past 5 years and verified by EPA, do not require an additional investigation unless one is requested by the Contracting Officer (CO) or Contract-level Contracting Officer Representative (COR). These employees must still be fingerprinted at a time and location specified by the COR.

In order to prevent any interruption of contractor services pending the completion of the OPM background investigation, the Office of Administrative Services (OAS) Security Management Division (SMD) has procedures in place to issue temporary or provisional badges.

When reporting in person, as directed by the contract-level COR, contractor employees must provide two forms of original identity source documents from the lists on Form I-9, OMB No.1615-0047, Employment Eligibility Verification (available at http://www.formi9.com/i-9.pdf) .At least one document shall be a valid State or Federal Government-issued picture identification.

Contractor Employees Requiring EPA Access for Less than 24 Hours a Week for 6 Months: These contractor employees may be subject to the above requirements, and may have limited and controlled access to facilities and information systems.

Foreign National Contractor Employees: To be eligible to work on-site at an EPA controlled facility or to access EPA information systems, a foreign national contractor employee must have been admitted to the U.S. on an Immigrant Visa or a Non-Immigrant Work Authorization Visa. Foreign nationals requiring access to an EPA controlled facility or EPA information system for at least 24 hours a week for at least 6 months a year must meet the above requirements for an EPASS badge, and in addition:

• In the "Continuation Space" on the SF 85P, provide the visa number, issuance location, and issuance date for the visa used for entry to the U.S;

• When presenting two identification source documents, as described above, provide at least one from List A on Form 1-9.

When determining a foreign national contractor employee's eligibility for an EPASS badge, EPA will consider the type of visa presented (immigrant vs. non-immigrant) and the reciprocity agreement between the U.S. and the individual's country of origin. These considerations are in addition to the "red flag" issues listed below.

Screening of the SF 85P: Information contained on the SF 85P may demonstrate that a contractor employee is not suitable to be given access to EPA facilities or information systems. PSB will screen information entered on the SF 85P prior to OPM initiating the background investigation. For individuals with admitted, derogatory information, issuance of an EPASS badge may be delayed pending further EPA review. Contractors are responsible for providing qualified personnel in accordance with requirements stated elsewhere in this contract. Contractors will only be notified by the COR if any contractor employee is found unsuitable to perform as a result of a background investigation, and must be immediately replaced by the contractor. The following are possible "red flags":

• Employment - Having been fired from a previous job, or having left under unfavorable circumstances within the past 7 years (Question 12 on the SF 85P);

• Selective Service - Failure to register with the Selective Service System; this applies to male applicants born after December 31, 1959 (Question 17 on the SF 85P);

• Police Records - Within the past 7 years, any arrest, charge, or conviction that has been upheld for violent or dangerous behavior or a pattern of arrests that demonstrates disregard for the law (Question 20 on the SF 85P);

• Illegal Drugs - Illegal use within the previous year, or drug manufacture or other involvement for profit within the past 7 years (Question 21 on the SF 85P).

b) Returning Badges

The contractor is responsible for ensuring that all badges are returned to the COR at the conclusion of the contract or when contractor on-site services are no longer required, or when an individual contractor employee leaves.

c) Subcontracts

These requirements must be incorporated into all subcontracts wherein employees' work under the subcontract requires physical access to an EPA controlled facility or logical access to an EPA information system for 6 months or longer.

d) Appeals

Contractors have the right to appeal, in writing to the COR, a determination to deny or revoke a badge. If the COR believes an appeal is justified, he/she will forward it to:

U.S. Environmental Protection Agency
Personnel Security Branch (PSB) (Mail Code 3206M)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

PSB's decision on behalf of the Agency will be final and not subject to further appeal.

e) Definitions

• "EPA Information System" means an information system [44 U.S.C. 3502(8)] used or operated by EPA, or a contractor of EPA or other organization on behalf of the Agency.

• "EPA Controlled Facilities" means:

EPA or Federally-owned buildings or leased space, whether for single or multi-tenant occupancy, and its grounds and approaches, all or any portion of which are under the jurisdiction, custody or control of the Agency;

EPA or federally controlled commercial space shared with non-government tenants. For example, if a department or agency leased the 10th floor of a commercial building, the Directive applies to the 10th floor only;

Government-owned contractor-operated facilities, including laboratories;

The term does not apply to educational institutions that conduct activities on behalf of departments or the agency or at which Federal Employees are hosted unless specifically designated as such by the sponsoring department or agency.

"Foreign National" means an individual who is not a United States citizen

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